

MANUFACTURERS' RECORD

A WEEKLY REVIEW OF THE IRON, STEEL, METAL & HARDWARE TRADES.

AND A MANUFACTURING AND TEXTILE PAPER, DEVOTED TO THE UPBUILDING OF SOUTHERN MANUFACTURES AND THE DEVELOPMENT OF THE MATERIAL RESOURCES OF THE SOUTH.

WEEKLY.
\$3.00 PER YEAR.

BALTIMORE, MAY 17, 1884.

{ NEW SERIES,
VOL. V. NO. 14.

MANUFACTURERS OF
CARD CLOTHING
Of Every Description.

COTTON and WOOLEN MACHINERY.

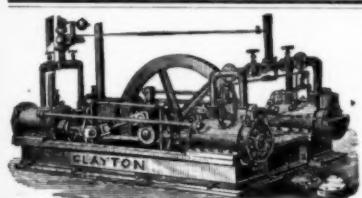
JAS. SMITH & CO.

Works, 413 to 421 Race St., Cor. of Crown.

Office & Store, 137 Market St., Philadelphia.

— DEALERS IN —

Manufacturers' Mill Supplies
Of Every Description.



Improved Deplex Air Compressor.

CLAYTON AIR COMPRESSORS

Rock Drills, Mining Pumps and General Mining Machinery,

For Catalogues, Estimates and Information, Address

CLAYTON STEAM PUMP WORKS, 45 & 47 York St., BROOKLYN, N. Y.

THOS. C. BASSHOR & CO.
— 28 Light Street, BALTIMORE, MD. —

— MANUFACTURERS AND DEALERS IN —
Boilers, Engines, Pumps, Wrought-Iron Pipe, —
For Steam, Gas or Water.
Malleable and Cast Iron Steam Fittings,
Gas and Steam Fitters' Tools, Brass Work, Steam and Water Gauges, Steam and Hot-Water Heating Apparatus, &c.
SEND FOR ILLUSTRATED CATALOGUE.

ELEVATORS

Send for Illustrated Circulars.

STEPHEN A. MORSE.

CARLTON M. WILLIAMS.

EDWIN F. MORSE.

CLEM & MORSE,

Manufacturers and Builders of HYDRAULIC, STEAM, BELT and HAND-POWER, PASSENGER and FREIGHT ELEVATORS, With most approved Safety Devices. Dumb-Walters, Automatic Hatch-Doors, &c.

Sole owners of the right to apply the RUFFE PATENT GOVERNOR to Elevators and Hoisting Machinery.

411 and 413 CHERRY STREET, PHILADELPHIA, PA. Branch Office, 108 Liberty Street, NEW YORK.



ROCK DRILLS, Air Compressors,

Machinery for Tunneling, Grading, Mining, etc.

Two Complete Tunneling Plants Furnished Northern Pacific R. R. Co.

For Catalogues, Estimates, &c., address,

INGERSOLL ROCK DRILL CO., 10 Park Place, New York.
MORTON, REED & CO., Agents, Baltimore.



LOVEGROVE & CO. Engines, Boilers,

— 152 W. Third St., PHILADELPHIA, PA. —

→ MACHINE & TOOLS. ←

Send for
Circulars.



W. C. STEVENSON, Manufacturer of LOOM SHUTTLES and WEAVING REEDS,



Good Work. Low Prices. Quick Delivery.

For Cotton, Woolen, Silk, and Jute Mills. All Styles
Patent Shuttles and Irons.

LEICE REEDS AND ALL FINE REED WORK.—

PITTSFIELD, MASS.



TEXTILE MACHINERY.

THE BRIDESBURG MANUFACTURING CO.

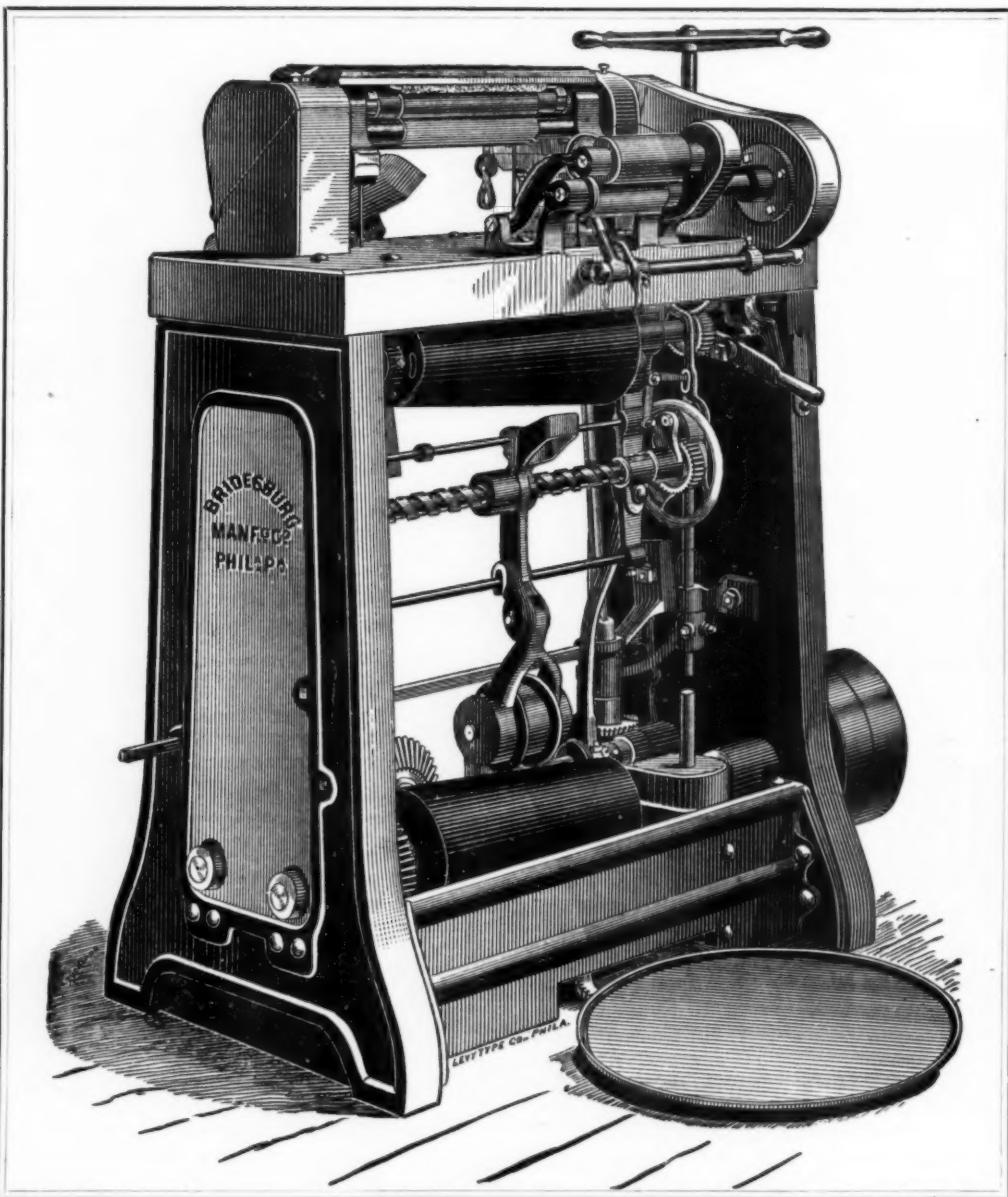
MACHINE BUILDERS,

OFFICES, No. 201 CHESTNUT ST., PHILADELPHIA.

CARDING, SPINNING, WEAVING,

And all other Machinery used in Cotton and Woolen Factories.

Also —
Buildings of all kinds & Power Works and All-iron Roller Mills.



LOOMS

For Cotton, Jean, and Worsted Goods, and recently improved and superior **Drop-box Looms**,
with patent full lift and full drop, skip-box motion and parallel pick,
for Ginghams and Dress Goods.

STOCKTON BATES, President. JOHN ROMMEL, Jr., Vice-President. JOHN ROMMEL, 3d, Secretary and Treasurer.

Estimates for Mills and Plans for same, with all details, furnished by the best Mill Engineers, at reasonable prices.

POWER-SAVING RING SPINNING.
With Excelsior, Sawyer, Rabbeth, Birkinhead, or any of the approved Patented Spindles. The
Excelsior Spindle drives the Bobbin positively and will run at any required velocity.

Self-Acting Mules for Wool,

All recent additions and improvements.

AMERICAN SUPPLY COMPANY,

Formerly Myron Fish & Co., of Valley Falls, R. I., and Kendrick Loom Harness Co., of Providence, R. I.

—MANUFACTURERS OF—

LOOM HARNESS AND REEDS,

Oak Belting, Lace and Picker Leather, and Dealers in Supplies for Cotton, Woolen and Silk Mills.

Agents for Joseph McGuire's Sons
Roller, Slasher & Clearing Cloths.

—Agents for—

RODDICK'S PATENT IMPROVED OIL CANS.

Calf, Sheep and Lamb Roller Skins, and Roll Covers' Tools.



—Special Notice to Worsted and Silk Mills.—

We Manufacture both Worsted and Cotton Machine-Knit Mail Harness for Weaving Fine Worsted and Silk Goods. Also a Full Line of Supplies for Jacquard Looms.

Office and Salesrooms, 10 Exchange Place, Providence, R. I.

—FACTORIES:

PROVIDENCE and VALLEY FALLS, R. I.

A. D. LOCKWOOD, Pres. JOHN KENDRICK, Vice-Pres. MYRON FISH, Treas. JOHN A. CARTER, Sec. JOSEPH H. KENDRICK, Gen'l Agent.

WE HAVE
Unequalled Facilities for Furnishing
Shuttles, Heddle Frames,
WIRE HEDDLES, WIRE GOODS
Of all Descriptions.

WE HAVE

THE WHITIN MACHINE WORKS,

J. LASSELL, President and Treasurer.

G. E. TAFT, Agent.

H. ELLIS, Superintendent.

—MANUFACTURERS OF—

COTTON MACHINERY

—**Openers, * Lappers, * Cards,**—

Railway Heads, Drawing,

RING SPINNING, SPOOLERS, WET and DRY TWISTERS,

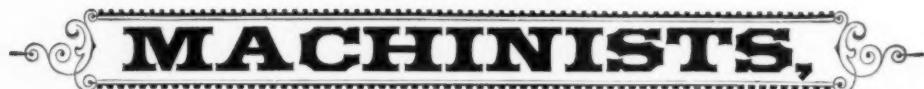
REELS,

—**WARPERS, * DRESSERS, * LOOMS, * &c.**—

—**Whitinsville, Worcester County, Mass.**—

PLATT BROTHERS & CO.

(LIMITED.)

**HARTFORD WORKS, OLDHAM, LANCASHIRE,**

Beg to Call the Attention of Worsted Spinners and Manufacturers to their Improved Machinery for

Carding, Combing, Preparing, Spinning AND Weaving Worsted ON THE FRENCH SYSTEM.

PLATT BROTHERS & CO., Limited, are also Makers of the following Machinery:

New Patent Cleaning Machines for Cotton.
 Crighton's Patent Opening Machines for Cotton.
 Hard Waste Breaking-up Machinery.
 Patent Burrung Machines for Wool.
 Machinery for Preparing, Spinning and Doubling Cotton,
 Wool, Worsted and Silk.
 Ring Spinning and Doubling Machines.
 Combing Machines for Cotton—Heilman's or Whipple's
 Patent.
 Patent Brick-making Machinery.

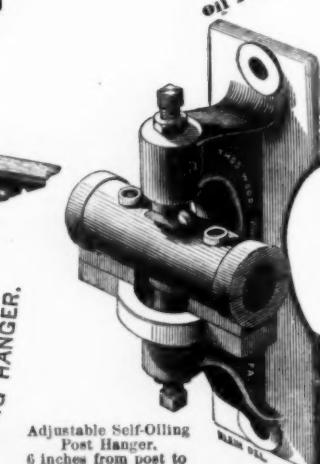
Combing Machines for Wool, Worsted, &c.—Little & Eastwood's Patent.
 Machinery for Carding and Spinning Silk Waste.
 Power Looms for all Descriptions of Plain and Fancy Cloths
 in Cotton and Wool.
 Sizing, Dressing, Warping, Beaming, Winding, and Reeling
 Machinery.
 Cloth-folding and Measuring Machines.
 Hydraulic and Cam Bundling Presses for Yarn and Cloth.

Also, Makers of PATENT MACARTHY COTTON GINS, Hand or Power, for long or short stapled Cottons.

FOR FURTHER INFORMATION AND PRICES APPLY TO

SAMUEL WOOD, Agent, 34 LETITIA ST., Philadelphia.

Agent for Thompson & Co.'s English Card Clothing.

Ball and Socket
Self-Oiling Pillow Block.Adjustable Self-Oiling
Post Hanger.
6 inches from post to
center of shaft.Adjustable Self-Oiling
Post Hanger.
6 inches from post to
center of shaft.

FAIRMOUNT MACHINE WORKS.
 Office, 2106 Wood St., Philadelphia.
THOMAS WOOD,
 Manufacture as Specialists
 Power Looms, Patent Bobbin or Quill
 Winding Machines, Plain and Presser
 Beaming Machines, Plain and Presser
 Warp Spooling Machines, Plain and Presser
 Scouring, Fulling, Dyeing, Sizing,
 Underfacing, Finishing, Cal-
 ing, Drying, &c.
WARPING MILLS,
 16, 18 and 20 yards Circumference,
 WITH IMPROVED HECKS.

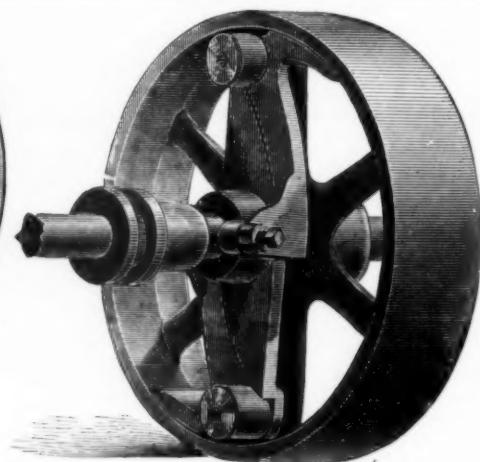
ADJUSTABLE SELF-OILING HANGERS, PULLEY IN TWO PARTS
 With Patent
 8, 10, 12, 15, 18, 20, 24 and 30 in. drop.
 Also WALL, POST AND GIRDER HANGERS.
 Pulleys, from 4 inches to 10 feet in diameter.
PATENT FRICTION PULLEY.
 Pulleys in two parts, any size required.
 Patent Hoisting Machines.
 Oil Presses for Lard, Fish and Paraffine.

Special Driving,
 such as Angular, Muley, and Gallows Driving,
 furnished for any position
 where possible to transmit power by belts.

PULLEYS from 4 inches to 10 feet in diameter.

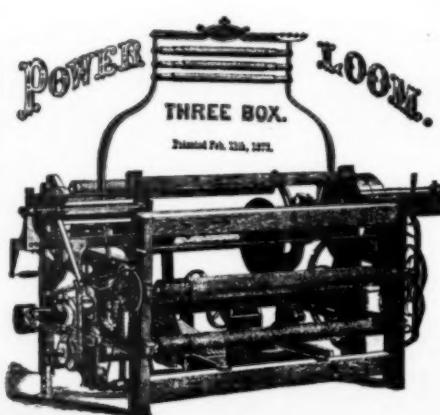
Why use old style Bearings, that require oiling
 every day, when you can get Bearings at less cost
 that only require oiling once in Six Months, and
 thus save oil and labor enough to pay for the bear-
 ings in use. Test the matter for yourselves; a
 trial always secures the trade.

ADDRESS,
THOS. WOOD,
 Office, 2106 Wood St.
 PHILADELPHIA, PENNA., U. S. A.



PATENT FRICTION PULLEY.

Simple, reliable and very durable.
 Suitable for any kind of driving, they
 serve equally well as driver or driven.



COTTON MACHINERY.

— SLASHERS.—

with Patent SLOW MOTION for "DOFFING" without stopping MACHINE, and REGULATING ROLLER, insuring perfect uniformity of SPEED and stress of yarn in passing through MACHINE. Over **800** at work in America alone.



WARPERS.

Over **6,000** in operation, with our Singleton's Patent Stop-Motion.

SPECIALTIES—Openers and Lappers, Cards, Drawing, Slubbing, Intermediate and Roving Frames, Patent Electric Stop-Motion, already applied to near **8,000** delivery heads of Drawing, and **50,000** Intermediate Spindles for preventing "Single;" Ring Spinning and Twisting Frames, the latest and best improvements; Self-acting Cotton and Woolen Mules; Patent Revolving and Traversing Yarn-Beam Pressers for Slashers; Card Clothing, in Leather, Rubber and Cotton; Spindles, Flyers and Fluted Rolls, Looms, etc., etc.

HOWARD, BULLOUGH & RILEY,

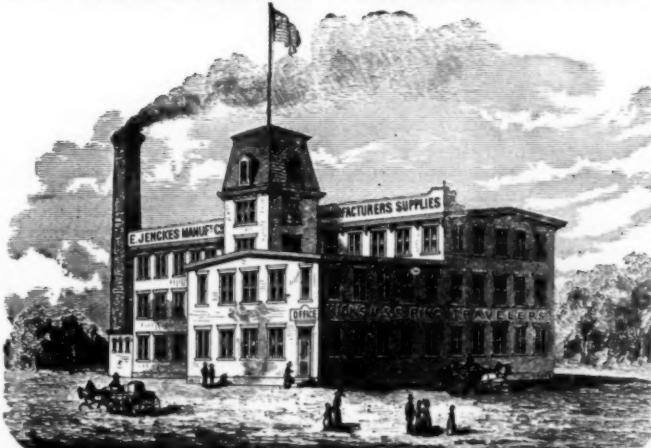
MILL ENGINEERS, ARCHITECTS.

Plans and Estimates on Request.

19 Pearl Street, BOSTON.

{ CORRESPONDENCE SOLICITED.

E. JENCKES MANUFACTURING CO., PAWTUCKET, R. I.



SOLE MANUFACTURERS OF

HICK IMPROVED

U. S. Standard RING TRAVELERS,

Belt Hooks, Gimlet Pointed Wire Goods, Spinning Rings, Cotton Banding, Twine, etc. Spring Pins, Spring Cotters and Flat Spring Keys.

MANUFACTURERS' SUPPLIES,

LEATHER BELTING AND LACE LEATHER,
Roller, Slasher and Clearer Cloths.

Send for Illustrated Catalogue.

MOSHELEY'S CELEBRATED MOLLIS OIL.

It is a splendid lubricator for Stationary Engines, Printing Presses, Paper Mills, Saw Mills, Cotton and Woolen Mills, Spindles, &c. It is the *cheapest and best Oil* for Machinery, Harness, Belts, Boots and Leather generally. Warranted a Water-Proof Leather Preservative. It is penetrating, and renders soft and pliable the hardest leather.

Fire-Proof, Barn, Fence, Bridge and Roof Paint

MIXED READY
FOR USE.

Our Fire-Proof Barn, Fence, Roof and Bridge PAINT is unsurpassed for painting exposed surfaces, such as Tin, Iron or Wood Roofs, Wagons, Farm Implements, Fences, Barns, Cars, &c. &c. mixed ready for use, will not settle, will be found convenient, saving labor and time, and at the same time is handsome and durable. SOLD IN ALL-SIZED PACKAGES FROM 1 to 50 GALLONS.

Prices Mailed on Application. HIRSHBERG, HOLLANDER & CO., 195, 197, 217 and 240 W. Pratt St., Baltimore.

WHITINSVILLE SPINNING RING CO.



WHITINSVILLE, MASS., U. S. A.

SUPERIOR WORKMANSHIP.

NOT EXCELLED IN DURABILITY.

EVERY RING WARRANTED.

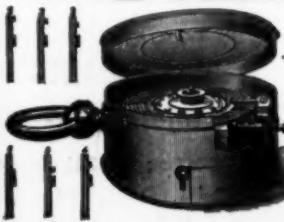


The Simplest and Best Method of Adjusting Rings.

SEND FOR SAMPLE AND PRICE-LIST.

BUERK'S WATCHMAN'S TIME DETECTOR.

—IMPORTANT FOR ALL LARGE CORPORATIONS AND MANUFACTURING CONCERNs.—



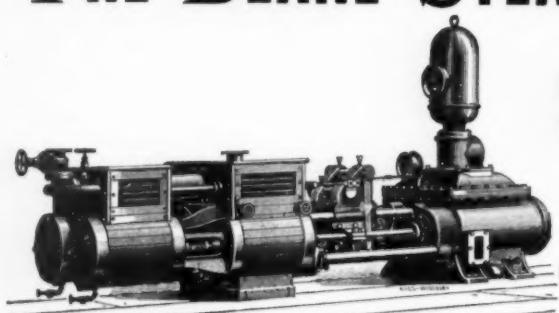
Capable of controlling with the utmost accuracy the motion of a watchman or patrolman as he passes different stations of his beat. The instrument is complete in itself, portable, and as reliable as the best lever watch. It requires no fixture or wires communicating from room to room, as is the case with ordinary watch clocks.

The Instrument will in all Cases be Warranted Perfect and Satisfactory.

P. O. Box 2470.

J. E. BUERK, Proprietor, No. 230 Washington St., BOSTON, MASS.

THE DEANE STEAM PUMP CO., HOLYOKE, MASS.



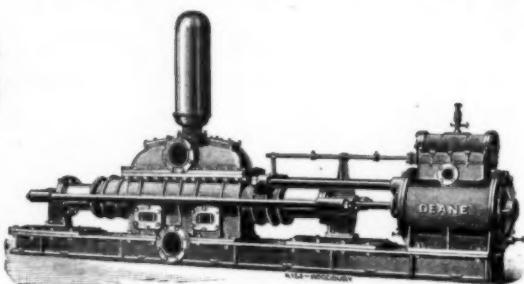
—MANUFACTURE—
STEAM PUMPS

—FOR—
Every Service.

SEND FOR ILLUSTRATED CATALOGUE.

WAREHOUSES:

NEW YORK—92 and 94 Liberty St.
BOSTON—54 Oliver St.
PHILADELPHIA—49 N. 7th St.
CHICAGO—226 and 228 Lake St.
ST. LOUIS—620 and 622 N. Main St.



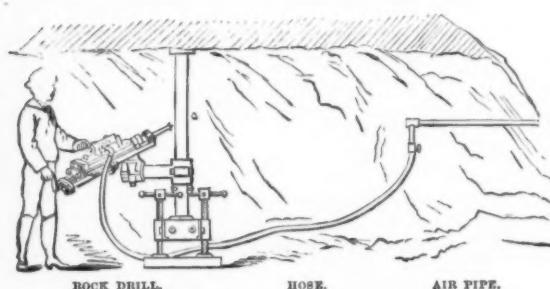
Water-Works Pumping Engines.

Single, Duplex, Compound, Condensing or Non-Condensing.
Estimates furnished on application.

INDEPENDENT CONDENSING APPARATUS A SPECIALTY.

Mining Pumps.

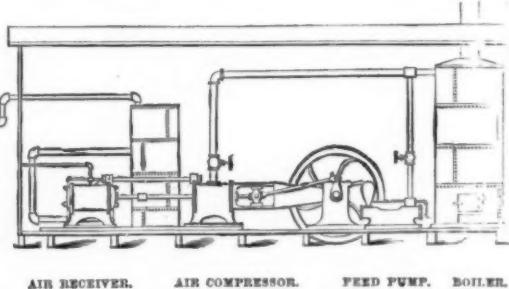
Our Patent Double-Plunger Sinking Pump has been adopted by the leading mines.



ROCK DRILL.

HOSE.

AIR PIPE.



AIR RECEIVER.

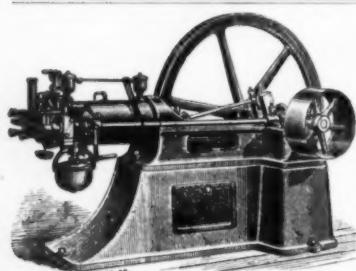
AIR COMPRESSOR.

FEED PUMP. BOILER.

RAND DRILL CO.

23 Park Place, NEW YORK.

Rock Drills,
Air Compressors, and
General Mining Machinery,
Rackrock Blasting Powder,
Blasting Batteries and Fuse.



Over 14,000 in Use.

Otto Gas Engine

20 to 70 per cent less Gas consumption than ANY other ENGINE.

Working Without Boiler, Steam, Coal, Ashes or Attendance.

Started instantly by a Match, it gives full power immediately. When stopped, all expense ceases.

No explosions, no fires nor cinders, no gauges, no pumps, no engineer or other attendant while running. Recommended by insurance companies UNSURPASSED IN EVERY RESPECT for hoisting in warehouses, printing, ventilating, running small shops, &c. Sizes: 1 to 25-horse power.

Branch Office, 214 Randolph St., Chicago.

SCHLEICHER, SCHUMM & CO., N. E. cor. 33d and Walnut Sts., Philadelphia.

LOWELL CARD CO. CARD CLOTHING

J. CLARK, President.

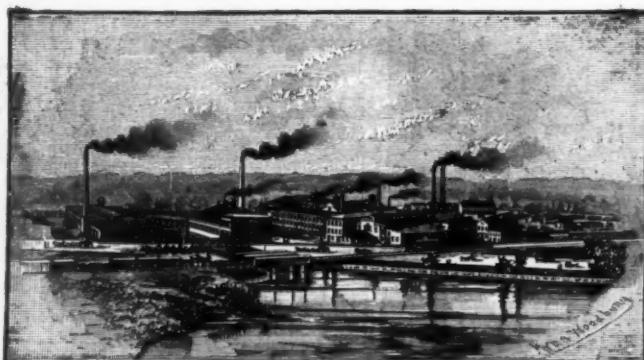
S. S. GOULD, Treasurer.

MANUFACTURERS OF

Of Every Description, LOWELL, MASS.

Washburn & Moen Manufacturing Co., Worcester, Mass.

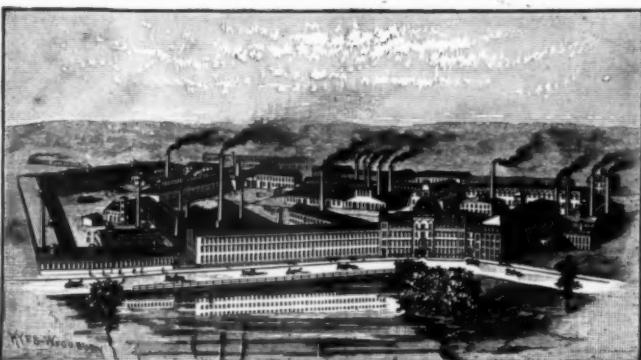
Wire Drawers, and Manufacturers of Iron and Steel Wire of Every Description.



Iron and Steel Telegraph and Telephone Wire.

Patent Steel Wire Bale Ties, Pump Chains, Chain Wire, Steel Wire for Springs, Needles and Drills, Watch Main Springs.

Send for Price-Lists, Circulars and Descriptive Pamphlets on Our Specialties.



NEW YORK WAREHOUSE:

21 Cliff Street,

New York City.

GLIDDEN PATENT STEEL BARB WIRE.

The Best Fence Material in Use.
For Sale by Special Agents and Hardware

Proof against Fire, Wind and Flood.
Dealers in all Parts of the United States.

CHICAGO WAREHOUSE:

107 Lake Street,

Chicago, Illinois.

BALTIMORE Manufacturers' Record.

PUBLISHED EVERY SATURDAY.

Office, Maryland Building,
22 Second Street, BALTIMORE.

R. H. EDMONDS, Editor.
W. H. EDMONDS, Associate Editor.

NEW ENGLAND BRANCH OFFICE:
Room 1, No. 19 Pearl Street, BOSTON, MASS.
JESSE W. BIGSBY, Resident Partner.

SOUTHERN OFFICE, ATLANTA, GA.—
I. W. AVERY, Manager.

NEW YORK OFFICE, Room 14, No. 29 Park Row.
JAMES L. ELY, Manager.

Price of Subscription Per Year in Advance:
(POSTAGE INCLUDED.)

TO UNITED STATES AND CANADA, \$8.00
OTHER COUNTRIES, - - - 4.50

ADVERTISING RATES:

One square (14 lines Agate, 1 inch)	1 time.	\$ 1.50
" "	" 4 "	5.00
" "	" 3 mos.	10.00
" "	" 6 "	18.00
" "	" 1 year	32.00

For advertising on outside pages add 50 per cent.
to the above rates.

Reading Notices 50 cents per line each insertion.

BALTIMORE, MAY 17, 1884.

Our readers will confer a favor upon our advertisers and upon us, as well as benefit themselves, if, whenever they write to anyone advertising in this paper, if it is only for a catalogue, they mention that "your advertisement was seen in the BALTIMORE MANUFACTURERS' RECORD." A careful compliance with this request will be much appreciated.

CORRESPONDENCE relating to the manufacturing, mining, lumbering and all other material interests of the Southern States is solicited. We invite those interested in the development of the South to make free use of our columns. Reaching so many capitalists in all parts of the United States seeking profitable investment in the South, the MANUFACTURERS' RECORD offers an excellent chance for the people in that section to place the advantages of each locality before those likely to be interested. We will take great pleasure at all times in telling what has already been accomplished in the South, and showing up the opportunities of doing still more,—so if you desire to attract immigration or capital, or if you know of an opening for profitable investment in manufacturing, mining or kindred pursuits, write us an account of it. It will be published free of cost.

WHAT uses will you find for all the iron that is made after all the railroads in the country have been laid with long-lasting steel rails? asked a gentleman the other day who is interested in Southern iron affairs.

THE Atlanta Constitution, and some other Southern papers, appropriate our statistics as to the progress of Southern cotton manufacturing, but use them as their own editorial work, without a word of credit,—a kind of journalism that is not usually esteemed very highly.

OUR very excellent contemporary, the Industrial World, of Chicago, appears with a new heading of unusual excellence of design.

A Danger to be Avoided.

"You were right and should repeat it at least once a month," said a prominent Southern coal operator a few days ago in discussing the editorial in a late issue, in which we urged upon Southern people the importance of not rushing into new manufacturing or mining enterprises unless these enterprises were to have the benefit of experienced management. Although the Atlanta Constitution thought our advice was not needed, we feel sure that it is; and the newspaper that does not try to keep its readers from making mistakes that will entail great loss, fails to do its duty. We know that the enthusiasm of the Southern people in regard to the material development of their marvellous resources is so great that they are readily disposed to invest in any new enterprise that looks promising. This spirit is heartily to be commended. It is the spirit that will do vast good for the South, but in such matters prudence and care are essential. It is useless to expect the Southern people, who, until lately, have done comparatively little manufacturing, to be as thoroughly posted in regard to the management of such enterprises as the people of the North, who are brought up with factories all around them, and whose practical education has been gotten in the workshop. That the advantages for many kinds of manufactures are greater at the South than in any other section admits of no question; but notwithstanding all this, success is very uncertain unless there is the best management.

The gentleman whose remark begins this article has seen the force of what we have stated. Some years ago coal mining became the rage in his town, and many companies were organized to work most excellent coal properties. The citizens of that town, though they had grown rich at other things, and though their business capacity was of a high order, knew nothing of coal mining. Unfortunately, however, they thought they did; but the fact that their coal mining operations were abandoned in a few years with an aggregate loss for the various companies of about \$800,000, all of it home money, demonstrated that they did not understand the business. Their mines were well located, their coal was of excellent quality, and yet they only piled up debts. Under judicious management these mines would have been very profitable, as subsequent events have proven; but as the gentleman who told us, and who, by the way, saved the mine of which he was president from serious disasters as befell others, said: "We lacked experience."

With an earnest and abiding faith in the glorious future of the South we are unceasingly working for the welfare of a section in which we are from every motive so deeply interested; and we must raise a voice of

warning not against putting money in new enterprises, but of rushing into enterprises that are not to have the benefit of the most thorough practical management. Some weeks ago a Southern paper, in trying to work up a boom for a cotton mill in its town, claimed the most marvellous profits for Southern cotton mills—ranging from 30 to 50 per cent. Such statements do harm. Southern cotton mills are undoubtedly most excellent things, and we only wish we owned a few; and the South is, without a doubt, to be the cotton-manufacturing centre of the country. But if these mills are regularly paying from 30 to 50 per cent. dividends we have failed to hear it. We are anxious to see the Southern people turn their attention to the inauguration of new enterprises and to the building up of their own sunny land, that they may at the same time rebuild their fortunes, and not leave all the profits of such industries to be reaped by Northern and Western men, and it is for this very reason that we urge the importance of investing their money only in such enterprises as are to have the benefit of thorough practical business management.

The Founding of a Town.

Some months ago we told of how two Georgians,—the Gordon Brothers—had laid the foundation for a new city. Doubtless many of our readers thought little of what that meant. So let us take another look and see what has been done.

Near Tuscumbia, Alabama, bordering on the Tennessee River, there is a magnificent location for a great manufacturing city. The Gordons saw this and purchased a large tract of land. Then they organized a company, with half a million capital, to build a town,—a business, which, by the way, is becoming very popular at the South. The stock was quickly taken; but before the company was fully organized, a New York Southern railroad syndicate concluded that they would like to take a hand in the building of this town, and so they were allowed to purchase an interest in the company. Then the organization and construction of railroads to connect this new place—a place without even a frame house—with the outside world was commenced and pushed with an energy and enterprise that were really wonderful.

Sheffield is the name selected for the town to be. The capitalists interested in Sheffield aroused an enthusiasm in regard to its future, greater probably than was ever before felt about any city ere the foundation for its first house had been laid. Having awakened such general interest throughout this country as well as in England, and all done in about six months, they determined to hold a great public auction of lots, and on the 8th of May the sale commenced. It is estimated that there were from

five to ten thousand people present. The first lot offered brought \$1,000. The bidding on others was rapid and even excited, and at the end of the first day it was found that the sales aggregated over \$100,000. By the following day the demand was so great that 50 per cent. advance was in some cases offered and refused for lots purchased the day before. On the second day \$8,900 was paid for one lot 150 feet square, on which to build an opera house.

Judging only by these figures one might think Sheffield was a thriving town with rapidly increasing industries, but Sheffield as yet is only an open field. It was to its future that men were looking. The advantages of its location are so great that, if once established, manufactures are almost sure to prosper; and even before the sale was made, many companies had been organized to build iron works, factories, &c. It has been determined to proceed at once with the building of gas and water works. A large hotel has been contracted for; two or more extensive iron furnaces will soon be under way and probably a large grain elevator. A \$50,000 bank will be established, the money being all ready, and the president and cashier having been elected. Two saw mills, a planing mill and a sash and door factory will soon be furnishing material for the many houses that will be building in a few weeks, while a \$60,000 brick yard is hard at work making bricks, and at least one more will be doing the same in a few days. Other enterprises of various kinds have been determined upon, and the rush of work at Sheffield within a few weeks will tell of how rapidly the South is pushing forward. No longer content to lag behind, she can now well afford to challenge the world for a race in material progress.

That Southern men have planned this new town, and that Southern men have been the heaviest investors in it, while it is Southern money that is to build most of these many manufacturing establishments, is sufficient proof that the people of the South are awake, and that the development of the South is not, as some seem to think, due entirely to outside men and money.

Pleasant Words.

The Norfolk Virginian, after republishing our statistics about the progress of the South, says:

"This is a remarkable exhibit and must have a powerful effect in attracting attention to the growth and prosperity of the South and the field it presents for the investment of capital. The MANUFACTURERS' RECORD is doing a grand work in its efforts to show what is being done in the South."

It is with great pleasure that we acknowledge the many kind words of praise so constantly received from the press and people of all parts of the South. The MANUFACTURERS' RECORD is devoted to the one great work of helping on the development of the Southern States, and we rejoice to know that our efforts are so well appreciated.

North Carolina Rocks.

[For the Baltimore Manufacturers' Record.]

Your invitation for correspondence on industries or industrial opportunities in the South tempts me to say something in the interest of the mineral deposits of North Carolina. A bare recital of material and extent of deposit is all that I shall attempt in this paper. The resources of the State are so extensive and varied as to make a comprehensive review of them impossible in a short sketch.

I will only mention in brief a few of the leading mineral deposits, beginning with

GOLD ORES.

The first gold ever discovered in America was found in this State, and long before the wild days of '49, when men braved the perils of crossing the great plains of the West in search of the gold fields of the Pacific slope, North Carolina had produced its 28-pound nugget, and Gold Hill and other mines were at work. Since this time the work of discovery and development has progressed slowly but surely until now the area of gold-producing localities covers some 29 counties. The most important deposits, and those which have been most thoroughly examined, are situated on a granitic axis running in a North-easterly direction across the State, mentioned by Emmons as the Greensboro and Salisbury granite belt. (There are two other granite belts, mentioned also by the same geologist—Emmons—one East and the other West of this central one, which is the most prominent of the three, and which yields magnificent building stones—grey granite and a beautiful syenite of a deep flesh color.) The most prominent gold-producing counties are Rowan, Cabarrus, Mecklenburg, Montgomery, Stanly, Davidson, Randolph, Union, Catawba, Caldwell, Burke and Gaston.

The ores embrace all the varieties or combinations of auriferous pyrites, galena and chalcopyrite, besides the free gold in the brown or decomposed ores, and in milky quartz, found both in place and "floating" on the surface, and in placer or grit deposits.

In Montgomery, Stanly, Cabarrus and Burke counties a large amount of free gold in "dust" and nuggets has been taken from these deposits, but mostly by native petty miners, with hand rockers. But few hydraulic miners have been worked, and they have not been pushed with any remarkable energy. The Sam Christian in Montgomery and the Shuford in Catawba have yielded more than any of the other placer mines, and both are said to have paid. The former is idle, while the latter is still running. It is claimed that in Montgomery county when the grain crops are short the gold crop is sure to be good. This is really true to a large extent, and may be explained in this way: The grain crops never fail in that section except from continued dry weather, and when one of these dry seasons comes on the branches and even the larger creeks go dry. Then it is that the golden harvest is gathered very carefully from the accumulation of sand and grit to be found in the beds of these various streams. This material is usually washed in ordinary hand rockers, though a few of the more prosperous gold hunters have Chili mill, or an arrastra, to help them to clean more thoroughly this auriferous grit. The average wages for a hand rocker is from one to three dollars per diem, while the Chilian mill will turn out from four to twenty dollars per day, according to the richness of the material.

The estimated product of North Carolina mines is about \$30,000,000, but this estimate is only based on what statistics could be obtained from several sources, while this county of Montgomery and other counties away from railroads have been

adding annually large amounts of gold of which no record has been kept.

The little word "if" plays havoc with many rich deposits here. "If" the sulphide ores could be made to yield say seventy-five per centum of their richness, or "if" any process could be found to work satisfactorily these various sulphides with that necessary desideratum, cheapness, then the yield must be immense.

The inability to work this class of ore is a great hindrance to mining in this section, and at once opens a place for inventive genius. Another sadly depressing cause to be contended with is mismanagement. This last trouble has caused many failures, and is to-day a great demoralizing influence, crippling our more rapid development. When smelting furnaces are introduced, and are conducted legitimately and on business principles, as in the West, practical results may be confidently expected from this now non-producing material.

COPPER ORES.

are as abundant, and probably more widely spread than the gold ores, but are not found everywhere in paying quantities. Chalcopyrite, carb. of copper, malachite and vitreous ores are the ordinary forms in which this material is found, though red oxide, grey copper, azurite and copper glance are frequently met with.

The Messrs. Clayton, of your city, are the most successful and prominent copper miners in North Carolina. They are now working a large force at the Conrad Hill mines, in Davidson county, and are turning out thousands of pounds of copper in ingots, while the gold which is associated with their ore—prill, or peacock ore—more than pays the expense of working.

It is a fact sometimes overlooked, or unknown, that most of the North Carolina ores are auriferous, and may be worked with profit for gold.

GALENITE

occurs in the State, and is generally very complex, most all of it carrying gold, silver, copper, lead, zinc and sulphur. The Old King or Silver Hill Mine, in Davidson Co., is the oldest and deepest yielding this material in the State. It has been worked to a depth of nearly 800 feet. The ores—argentiferous galena and zinc blend—are put to a practical use during the war.

The Confederate government had not an overplus or surplus of any kind, and they found it necessary to utilize this ore to make bullets. They had no time to extract the silver. Rather extravagant bullets they.

IRON ORES

exist in about 30 counties of the State in workable quantities. From Chatham county west to the Tennessee line, iron is found; the finest ores are in the extreme western part of the State. Immense beds or deposits of strongly magnetic iron are there found, which is free from phosphorus and sulphur. In the Piedmont iron beds the presence of titanic acid sometimes prevented extensive development in antebellum days. No experiments have since been made; though it is now understood that ores of this kind may be successfully treated.

The magnetic iron of Mitchell county is now being successfully worked. They are just finishing a blast furnace capable of turning out twenty tons of pig iron per day, at the famous Cranberry Iron Mines. They have built railway connections with Johnson's City, Tenn., and everything around the mine looks as if the Cranberry Company had settled down for a lifetime business. The ore is a highly crystallized magnetite, and is remarkable for its toughness and tensile strength. It may be of interest to give four analyses by Dr. Genth and one by Prof. Chandler, of New York, taken from the geological report of the State. They are as follows:

	I.	II.	III.	IV.	V.
Magnetic ox. of iron	94.37	91.45	85.59	80.77	91.89
Oxide of manganese	0.96	0.06	0.34	1.42	0.32
Alumina.....	0.42	0.77	0.11	0.52	0.13
Lime.....	0.43	1.01	0.74	.....	0.06
Magnesia.....	0.36	0.53	0.33	.....	0.23
Water.....	.....	0.44	1.58	8.21	1.15
Silica, Pyroxine, etc.	4.16	5.74	11.48	9.08	4.02
Sulphur.....	.....	.....	.....	0.25	.....
Phosphoric acid.....	.....	.....	.....	trace.	.....
Total	100.00	100.00	100.00	100.00	99.95
Metallic iron	68.34	66.22	61.98	58.49	66.63

OTHER MINERALS

of economic value to be obtained in merchantable quantities are corundum, mica, garnet, albite, barite, agalmatolite, asbestos, kaolin, pyrophyllite, and others, including zircon (ore of zirconium) and albrite. I might continue the list with rare minerals in the West, and then take the reader East through the marl and phosphate beds, and back again West through the forests, showing all their wealth of timber; but this paper is already long, so I will close by inviting those of your readers who may care to verify these statements to visit Raleigh this fall and attend the North Carolina State Exposition, which opens Oct. 1st and closes Oct. 28th. This exposition will probably do much to influence skilled labor and capital to seek here profitable fields for investment. It will be comprehensive and instructive, and no better opportunity will ever be given for seeing North Carolina. T K. BRUNER.

Salisbury, N. C., May 10, 1884.

Consumption of Cotton Goods in the South.

What a Correspondent Says of the Future.

NEW ORLEANS, LA., May 9, 1884.
Editor Baltimore Manufacturers' Record:

SIR:—It has never been my pleasure to see your journal until the copy you were so kind as to forward me, although I see frequent extracts from it in the Southern newspapers.

I rejoice at the excellent work you are at, the very liberal spirit characterizing it, and I especially congratulate you on your happy conception in enumerating the progress of Southern development—a conception as novel as beneficent, and it is almost a new discovery in journalism, a distinct epoch in enterprise in that line.

It is needless to say how I sympathize with the increased impetus you are giving to Southern progress. For nearly eleven years I have been fairly making the Northern journals groan under the weight of the numerous articles from my pen, predicting much that has come to pass, and far more yet in store for us in the constant harvests the South is reaping from the bounteous fields of her progress in the exhaustless future of her development. One could write a large book on entirely novel aspects.

But a little while ago the thought was suggested to me of the far greater consumption of cotton goods South in proportion to her population than at the North. I wish I had space for a long article on it. I need not assume (although it will be true) that the South will become the centre of the woolen, cotton and iron industries of the United States and of the cotton manufacturing of the world. But the ratio of cotton goods consumers will be greater for the whole country at the South than at the West. How? For many reasons; in the first place, a large immigration from the West to the South has set in and will be constantly increasing. Had these people stayed West, they and their increase would have used more woolen goods per capita than they will South. The climate not only admits of this, but compels it. How long can the Western and Northern people use cotton goods and fabrics into which it largely enters there as compared with a residence South? they with their short summers, we with our long ones and mild winters.

Again, immigration is not going West as it was. Much of it will come South. Indian wheat has sounded the knell of Western wheat. England (nearly ruined by wheat-raising) is going to give it up, is going to look to India for wheat, will look to dairy more, and hit the United States another lick by dispensing with much of the cheese and butter of the latter. If the immigrants and their increase had gone West who will come South they would have needed and used woolen goods and few cottons. South it will be just the reverse.

But again, more cotton goods, proportionately to population, will be used than ever, because they will be cheaper. When the South gets to making cotton goods at the same compensation New England enjoys, (or suffers,) then the cotton goods will be very cheap. Then New England must shut up shop. Does any one doubt that the cheaper a needed article, (other things being equal,) the larger its consumption?

Again, the negro race increases far more rapidly, in proportion to population, than an equal number of Western folk. They have the fecundity of rattlesnakes, as strongly Tory Sam Johnson said sneeringly of us Americans during the Revolutionary War. Look what a rumpus, what a howl of dismay, the last census caused in the Republican party! Now the negro is one of the great consumers of cotton goods.

Again, there will be a vast army of workers in the future South,—operatives from England, from the East, New England,—in the future cotton factories here. This will greatly disturb the proportion of wool consumers. Had all these New England operatives stayed there, woolen goods would have been their principal clothing. South it will be cotton. Had these English artisans stayed in England, they would not have contributed such a large ratio to an increased population and an increased consumption of cotton goods.

How will this tell on the Western farmer?

Well, a large proportion of non-consumers, who ate Western wheat, pork, beef, etc., will be out of his reach, and will eat these Southern-raised breadstuffs. They will not need his wool to go into goods to protect him from the rigors of their former climate.

Again, the New England farmers who used to make butter, cheese, raise vegetables, beef, mutton, etc., for these New England operatives, will raise corn and wheat, and increase and cheapen it in competition with the Western farmer.

Again, these factories South will stimulate sheep-raising here, and our wool will furnish a cheaper and better article for the factory than theirs. (I haven't time to prove this here.) Indeed they will have to buy our woolen goods and pay for the distance from us.

I might say far more. In these thoughts you will find, I think, the germs of great future events.

M. B. HILLYARD.

Important Road Southward.

Editor Baltimore Manufacturers' Record:

Our State, North Carolina, having granted a charter for a railroad from the South Carolina line, in Cleveland county, N. C., via Statesville, to the Virginia line in Surry county, N. C., called the "Statesville Air Line," and the company having organized, agreeable to provisions of charter, is now ready and anxious to co-operate with a reliable company to build the road. Extended, as designed, to Spartanburg, S. C., and Salem or Roanoke City, Va., it would make most important connections between the principal Southwestern and Northeastern cities, making an "inside track" and a great "thoroughfare," and developing a fine section of North Carolina for agriculture, water-power, minerals, timbers, &c.

Correspondence is invited. Letters to be sent to C. A. Carlton, Statesville, N. C., or "Director," Elkin, N. C.

May 8th, 1884.

New Log Saw Mill.

The accompanying engraving on this page is a faithful representation of the new band log saw mill, designed by the Egan Co., of Cincinnati, Ohio, successors to Cordesman & Egan Co., who have had long experience in the manufacture of band resaws, and have embodied in this machine all the points which they have found to be of advantage to saws of this class. The frame is of the straight column pattern, which is the strongest and best for this purpose. The wheels are of glued-up wood; the spokes being wrought iron and the rims are covered with leather or rubber, according to kind of work it is called on to perform. The adjustments are all made from the working side of the machine, so that the operator does not

produced is much smoother and brings a higher price in the market. For further particulars we quote the following from the company's catalogue:

"Band saw mills are of immense advantage and economy in cutting large logs and good lumber, such as wide poplar, walnut, ash, oak, cedar, pine, etc., and for cutting thin lumber for special purposes, such as $\frac{1}{4}$ ", $\frac{3}{8}$ ", $\frac{5}{8}$ ", $\frac{1}{2}$ " and $1\frac{1}{2}$ " it will excel all other machines.

The blade used is about 18 or 19 gauge, so that the kerf taken out is about a scant 1.16"—every four or five cuts made will save about an inch board over the ordinary mills with the top saw, and the lumber produced is much smoother and can be dressed by a much lighter cut, and will consequently bring a better price. We have made band saws and band resaws for

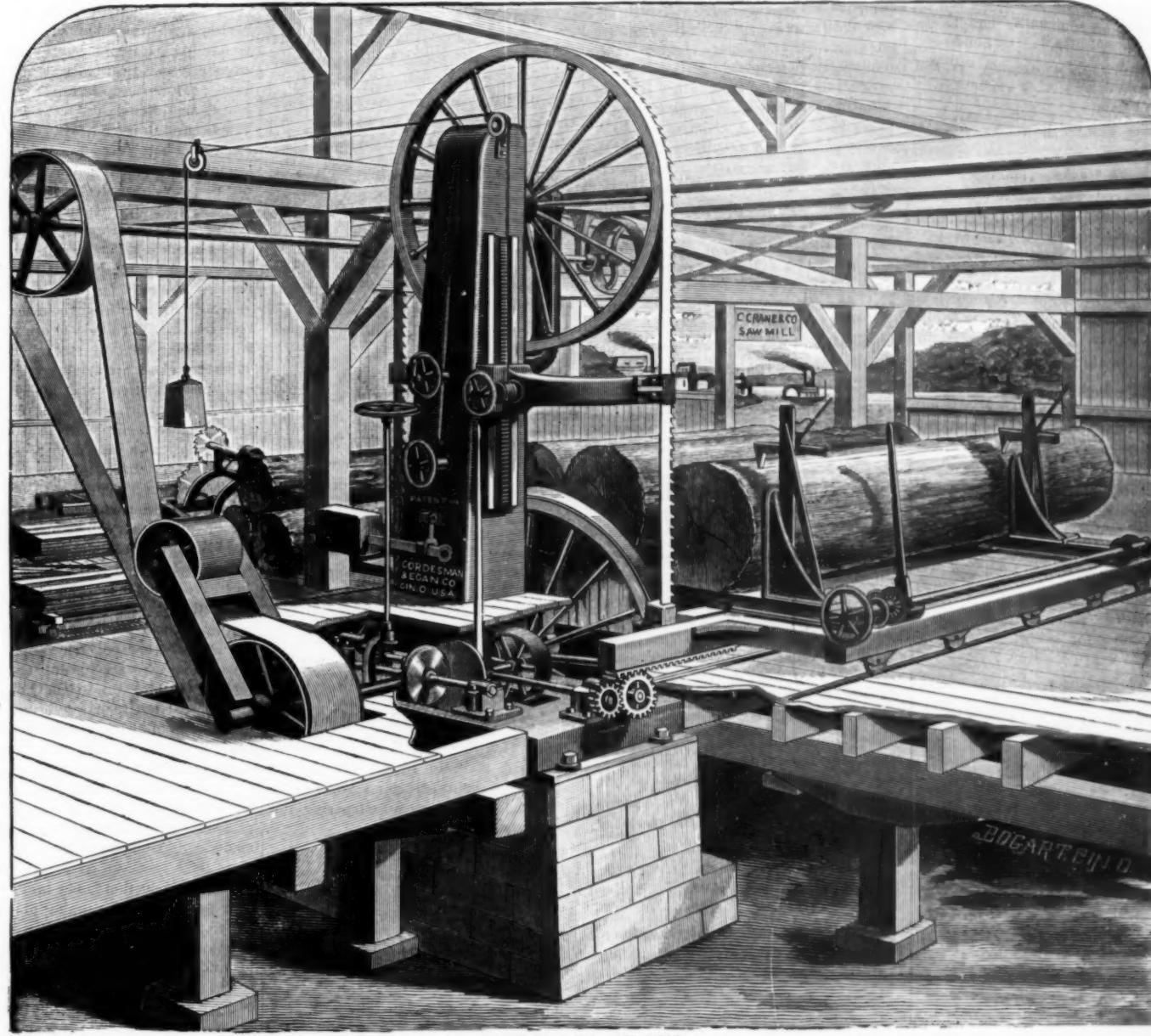
revolutions per minute. The axles are of 4-inch steel, and run in self-oiling boxes of great length, lined with the best Babbitt metal. The wheels, 78 inches in diameter, are made of glued-up hard wood, and are of the greatest strength. Outside bearings to the axles are on each wheel, so that the wheels run perfectly between bearings.

The feed is a friction disk, and can be changed instantly by the hand lever from 0 to 100 feet lineal per minute, or equivalent to a 6-inch feed, and the return motion of the carriage may be 300 feet if desired. Every adjustment on this machine can be made from the working side, so that the operator never has to leave his place. The best patent head blocks, carriage and trucks, and rolls, as well as one Perin blade, 6 inches wide, together with wrenches, go with each complete machine."

List of Patents.

The following patents were granted to citizens of the Southern States, bearing date May 6, 1864. Reported expressly for this paper by Louis Bagger & Co., mechanical experts and solicitors of patents, Washington, D. C.

- 298,96. Anderson, C. B., Maysville, Ky. Fire-escape.
- 298,270. Arher, H. F., Marietta, Miss. Fertilizer distributor.
- 298,060. Blair, Jno. C., Louisville, Miss. Bottling machine.
- 297,171. Carr, Jas. W., Richmond, Va. Car-axle box.
- 298,180. Cook, Christian, Baltimore, Md. Coal bucket.
- 298,181. Cox, Jos. M., Richmond, Va. Drawers.
- 297,976. Dueber, Jno. C., Newport, Ky. Watch-case center.
- 297,977. English, Robert, Austin, Tex. Oil-can.
- 298,195. Gardner, E. T., Rocky Mount, N. C. Saw mill feed mechanism.
- 298,299. Gladney, R. P., McCloudy, Miss. Separator for peat &c.
- 298,985. Golden, T. E. & J. P., Columbus, Ga. Shaft-coupling.
- 298,081. Golding, William, New Orleans, La. Steam engine.



PATENT BAND SAW MILL.

have to leave his place. The feed is a friction disk, and is very powerful and reliable. The company have put quite a number of them into mills in various sections of the country, and on different kinds of wood, and have received the most flattering reports of their working. C. Crane & Co., of Cincinnati, from whose mill this illustration was taken, have just put in another one, taking out the circular mill shown on opposite side of the log-way in the illustration. Anyone running a circular mill can make the change to a band saw mill without taking out his carriage or head-blocks, by simply taking out the circular and putting the band in its place, and attaching pinion to the end of the feed shaft of the band mill. This machine is coming into greater use every day, as the kerf taken out is very small and the lumber

years, and have put all our experience and knowledge to the best account, and have introduced improvements and conveniences highly favorable to the preservation and durability of the blade. Our patent for adjusting the upper wheel so as to guide the saw to any path, our patent compound weighting levers, patent guide, etc., are all embodied in this machine, and we have no hesitation in saying it is superior to any other made.

With this preface we will explain the machine presented: The base is very solid and heavy, and carries the main column, the gears, feed-shafts, as well as the lower boxes and shafts. The column is made tapered and of extra strength, and is fitted to the base on a planed surface, and stands perfectly solid, requiring no bracing of any kind, even when wheel has a speed of 425

The Band Saw Mill, as made by us, is no longer an experiment—it has come to be a standard machine, and we guarantee it to stand up and do any kind of sawing.

We have a great many of these mills in operation by parties who have taken out the Circular Saw Mill, and many still use the circular saw on one side of the logway and a band saw on the other."

For cuts and prices of this or other improved wood-working machinery, address The Egan Co., successors to Cordesman & Egan Co., 228 to 248 West Front street, Cincinnati, O.

If you are not already a subscriber to the BALTIMORE MANUFACTURERS' RECORD, send us \$3 and you will receive it regularly for one year or six months for \$1.50.

- 298,080. Holloman & Green, Kingston, Texas. Picture-case for tombstones.
- 10,474. Liddell, W. J. F., Charlotte, N. C. Circular saw mill. (Release.)
- 298,005. Lutz, F. F., Louisville, Ky. Car-coupling.
- 298,007. Mann, J. H., Crafton, Texas. Locomotive wheel.
- 298,010. Mayfield, S. B., Palestine, Texas. Car-coupling.
- 298,226. O'Daniel, J. D., Flatonia, Texas. Cotton press.
- 298,032. Pease, C. H., Louisville, Ky. Combined bottling and shipping can.
- 298,234. Rios, A. C. de los, New Orleans, La. Propelling apparatus for vessels.
- 298,035. Skaggs, W. J., Montgomery, Ala. Car-coupling.
- 10,477. Starke, P. H., deceased; A. G. Starke, Richmond, Va., executrix. Plow. (Re-issue.)
- 298,321. Stuck, G. A., Selma, Ala. Fire-hose.
- 298,135. Taylor, G. R., Louisville, Ky. Propelling canal-boats.
- 298,312. Tracy, J. C., Baltimore, Md. Drawers.
- 298,257. Vail, T. C., Topeka, Kansas. Easel.
- 298,324. Warren, C. C., Lodi, Miss. Cotton-gin gearing.
- 298,140. Welling, John E., Georgetown, Ky. Water-cooler.
- 298,351. Youngman, C. A., Louisville, Ky. Elevator.

CONSTRUCTION DEPARTMENT.

We publish, every week, a list of every new factory, of whatever kind, projected anywhere in the South; every railroad undertaken, and every mining company organized. This information is always fresh, and, by enabling manufacturers to correspond with the projectors of such enterprises before their supplies of machinery have been purchased, is of great value. Manufacturers will find it to their interest to read this department carefully each week.

The St. Joseph Orphan Asylum, Louisville, Ky., will put up a \$10,000 building.

G. Hunter & Son, Jacksonville, Fla., will put new boilers and other machinery in their lumber mill.

Mitchell & Tranter, Kentucky, will enlarge rolling mill.

F. Cantrell & Co., Spartanburg, S. C., have commenced work on the building for their foundry and wood-working shops.

The Burnham Grate Co., the organization of which was lately reported, will build their large foundry for making grates, mantels, &c., in Birmingham, Ala.

The Birmingham (Ala.) Cotton Mill Co. have added \$30,000 to their capital and will complete new building.

It is reported that the Conrad Hill Gold and Copper Mine and the Dodge Hill Mine, both in Davidson county, have been sold to an English company who will put in new machinery.

V. E. Schwab, M. Salsholtz and W. T. Linck, of Columbia, Tenn., will erect a distillery.

Clay & Hines, Aiken, S. C., have purchased a planing mill in that town, and will enlarge and add new machinery.

Miles Griffith, of Haverstraw, N. Y., has selected a location for his proposed paper mill in Salem, N. C.

Water-works and gas-works will be built in Sheffield, Ala., by Sheffield Land, Iron and Coal Co. of Alabama; postoffice address, Tuscaloosa, Ala.

The new car-wheel works to be built in Birmingham, Ala., as previously noted, have capital of \$50,000. Among those interested are C. C. Drake, of Detroit, Mich.; P. B. Warner, Covington, Ky., and W. B. Seaton, Greenup, Ky.

L. P. Thomas, Jr., of Atlanta, Ga., and Messrs. Geo. M. Traylor and George W. Duncan, of Washington, D. C., will build large tobacco factory in Danville, Va.

Incorporated in Kentucky—the Lexington Elevator Co.

L. H. McKinstry, of Minnesota, will probably start a peanut factory in Claremont, Va. Claremont Manf. Co. can probably give particulars.

A. W. Montgomery and W. C. Orr, of Talladega, Ala., and others will start shingle mill. Have purchased part of machinery.

Mr. — Gerbig, Hagerstown, Md., will enlarge soap works.

Emmett & Co., of Hagerstown, Md., have prepared plans for their grain elevator, previously reported.

The Riverside Furnace at Benwood, W. Va., will undergo repairs.

The B. & O. Railroad will establish large brickyards at Abingdon, Md.

The Southern Pump Co., of Nashville, Tenn., will erect two saw mills, sash and blind factory and planing mill at Sheffield, Alabama.

The Texarkana Foundry and Machine Works, Texarkana, Ark., organization of which was lately reported, will have capital stock of \$500,000. President, J. H. Droughn; vice-president, L. W. Lloyd; secretary and treasurer, G. W. Fouke. Work on buildings will be commenced at once.

P. L. Terry & Co., Roanoke, Va., have commenced to build a roller-process flour mill,—capacity 125 bbls. a day.

A. B. Tavel, of Nashville, Tenn., will start large brickyard at the new town of Sheffield, Ala.

The Salem & Southwestern Railroad Company has been organized at Salem, Va., with the following officers: R. H. Catlet, president; R. H. Logan, vice-president; John E. Pew, secretary; directors, J. C. Langhorn, S. F. Simmons, of Salem; Samuel Spencer, of Baltimore, president of Valley Railroad; C. A. Calhoun, of Montgomery county, and J. C. Green, of Baltimore, Md. The line extends from Salem southwest to Asheville, N. C., through the richest mineral belt of Virginia and North Carolina. At Salem it will intersect the Valley Railroad, which is finished from Baltimore as far South as Lexington, Va. From that point to Salem, a distance of about fifty miles, nearly all of the grading and masonry work is completed. The proposed line, it is said, will shorten the distance between Baltimore and Atlanta about 200 miles.

The Elkin Manufacturing Co., Elkin, N. C., after adding new machinery to their cotton mills, are now building new flouring and corn mills.

Wm. Wyant, near Cannelton, W. Va., will open a new coal mine and build coke ovens.

The Carver Bros., Coal Valley, W. Va., will open new mines and enlarge operations.

Incorporated at Calera, Ala., by Dr. Chas. Gibson, of Chicago, and Thos. Bradley, of Elmira, N. Y.—The Nottingham Earthenware, Chemical, Glass and Manufacturing Co., capital \$125,000, to manufacture earthenware, glass, &c.

The Nottingham Land, Furnace and Manufacturing Co. has been organized at Calera, Ala.,—capital, \$300,000,—by G. F. Anderson, A. J. Fox and Wm. Anderson, of Niles, Mich., and J. D. Hardy, of Calera, to erect iron furnace, &c.

The Temple Water-Works Co., Temple, Texas, will spend about \$6,000 in enlarging work.

It is reported that Gesni Carugh, of Hoboken, N. J., will put up a silk factory in North Carolina.

The Cumberland Steel Works, at Cumberland, Md., will probably enlarge.

Incorporated—The North Texas Land and Timber Co., near Wayne Station, Cass county, Texas. Capital, \$20,000.

A. C. Hauston, Richmond, Va., will build the First Presbyterian Church, at a cost of \$18,500.

The Bright Gold Mine, in Montgomery county, N. C., has been sold to Northern capitalists, who will work it.

Allen Howell, Waynesville, N. C., is preparing to build his large tobacco warehouse, and the plans are being drawn for another to be erected by the Planters' Tobacco Warehouse Co.

Machine shops for a branch road are to be built at Monroe, La., by the Cincinnati, New Orleans & Texas Pacific Railroad.

Mr. — Carter, of Tavares, Fla., will build sash, door and blind factory, corner of Mill and Irma streets of that town.

F. J. Miller has broken ground at Carrollton, Ky., for a new carriage shop.

The new mill of E. L. Dantzler, to be erected at Moss Point, Miss., as previously noted, will be built by the Filer & Stowell Co., of Milwaukee.

The Tennessee Handle Factory Co., whose works were lately destroyed by fire, have commenced to rebuild on a much larger scale.

The Louisiana Fibre Working Co., of New Orleans, expect to add \$100,000 to their capital and build a mill to make paper from bagasse. Col. Louis Bush is interested.

A company has been organized in Memphis, Tenn., to manufacture a new type writer invented by G. R. Anderson, of that city.

G. J. Boney, Wilmington, N. C., is getting machinery in place for his large corn and hominy mill, previously reported.

Col. J. M. Trice, Okolona, Miss., is president of the new \$10,000 cotton compress company previously reported as organizing in that town.

Judge Folk, of Brownsville, Tenn., contemplates putting up gas works at Trenton, Tenn.

Jackson, Ky., will build a \$15,000 school-house.

W. T. Parker, of Mississippi, contemplates erecting a wheel barrel factory in Anniston, Ala.

Ground has been purchased in Knoxville, Tenn., for the Knoxville Woolen Mills Company's mill, which will be of brick, 2 stories high and 300 feet long.

Riter & Conley, Pittsburgh, Pa., are contractors to build the large charcoal furnace to be erected by the Clifton Iron Co., of Jenifer, Ala., (lately Alabama Furnace Postoffice, Ala.)

The Raleigh Oil and Fertilizer Co., of Raleigh, N. C., previously mentioned, has elected officers. President, W. G. Upchurch, and secretary and treasurer, S. F. Mordecai. Will try and build mill by early part of September.

Hume & Bros., of Beaufort, S. C., will extend their phosphate-mining operations and put in machinery for preparing the rock for shipment.

Work on the furniture factory previously reported to be built at Morristown, Ark., will commence very soon. H. Buttenburg, P. Dorffer and Michael Sattler are interested.

Gas works costing \$45,000 will probably be built in Palestine, Texas, by A. A. Stevens, W. S. Wattis, J. T. Jones, and others.

McDuffie & Son's saw mill, Keyser, N. C., has been injured by boiler explosion.

Reported that a cotton factory will be built at Snowville, Va.

G. G. Potter has purchased a factory building at Quitman, Ga.; will enlarge it and put in machinery.

Mud River Coal Co., capital \$500,000, has been incorporated at Bowling Green, Ky. Will begin mining at once.

The Merchants and Manufacturers Association, Norfolk, Va., will probably erect a \$40,000 building.

The La Grange Oil Mill, La Grange, Ga., L. J. Render, president, will add new oil presses, a new gin, and also a fertilizer factory.

Contract has been let for building the roller flour mill in Comanche, Texas, previously mentioned.

BURNED.

Can factory of Kirwan & Taylor, Baltimore; loss, \$10,000.

Flour mill of Henry Record & Son, near Fallston, Md.; loss, \$10,000. Will rebuild.

Machine shops of M. Rudasill, Shelby, N. C.; loss \$3,500.

Textile Markets.

The determined policy of the manufacturers of dry goods, carpets, silks and hose to restrict production within assured market requirements is having a favorable effect, and developing a more healthy tone in the textile trade. Buyers generally have been led to expect a great overstocking of the market and a race among manufacturers and commission houses for the trade. The decided course adopted and pursued in New England and elsewhere has revived confidence, and, though not stimulating demand, is preparing the way for a steady, satisfactory fall trade at moderately remunerative prices.

The manufacturers of cotton goods report fair demand under restricted output. Brown and bleached shirtings and cotton flannels are moving in a small way at generally firm prices to meet current requirements. Print cloths are weak, notwithstanding receding stocks. Ginghams and seersuckers are moving very freely in both manufacturers' and jobbers' hands. Orders for woolen goods are placed very slowly. Buyers are low in stocks and have been waiting for numerous elements of trade uncertainties to be removed. The markets are in a condition to take heavy supplies of fall and winter woolen goods, but these requirements will be placed cautiously, in conformity to the conservative policy which has controlled the trade all along. There is nothing in margins to tempt heavy production.

Hosiery manufacturers are very quiet; here and there a concern is making full time. Some few are rushing out samples for the fall trade, and some houses have already sent out their salesmen. Restriction is maintained in several hosiery centers. Stocks at Cohoes, by July 1, will be about one-half what they were a year ago. Narrow margins do not repress enterprise or check the spirit of improvement and expansion. Carpets are moving slowly from manufacturers' and jobbers' hands, and there is a general feeling in favor of guarding production. The ingrain carpet men are nearly all running along nominally on full time, but not crowding their hands or their capacity. The Brussels manufacturers are not anxious to increase stocks at present. It is less a question of cost than over-production in the present strike. Prices paid to female labor in Eastern carpet mills is 4½ cents to 5 cents per yard.—*Philadelphia Press*.

The Planters' Hoe Co., Troy, N. Y., are making extensive additions to their buildings and machinery, necessitated by the increasing demand for the Herrington potato-digging machine, lately illustrated in the MANUFACTURERS' RECORD, and which is being rapidly introduced into potato-growing sections. This machine seems to have proved a great success.

LOCKWOOD, GREENE & CO.

MILL ENGINEERS

Office, 65 Westminster St., Providence, R. I.

Carefully prepared plans, specifications and estimates furnished for the construction, equipment and organization of new mills and the revision and improvement of old.

MANUFACTURING.

Subscribe to the Baltimore Manufacturers' Record. Price \$3 per year.

BALTIMORE.

MESSRS. W. J. CLARK & BRO., N. Holliday street, manufacturers of hydrants, have just received a number of large orders from the city. Of late their business has been very satisfactory in the South.

THE Baltimore Steam Packet Co. at Union Dock have placed in position a "Ball engine" and machine for electric lighting by the Edison system, which will soon be in operation. The electric light of the Baltimore & Ohio Co. at Locust Point has been in satisfactory operation for some time, and is also run by a Ball automatic engine. Several more of these engines will soon be at work at other points in the city. Some important advantages are claimed for these engines, owing to some new features they possess, a description of which can be had by applying to the agent, W. C. Wolfe, 144 W. Baltimore street.

MR. W. J. JOHNSTON, N. Holliday street, manufacturer of copper kettles, reports business as exceedingly brisk, especially in the city. Since the first of the year his business has shown a large increase compared with preceding years.

MESSRS. L. P. CLARK & SONS, manufacturers of hydrants, street washers and closets, have on hand many orders for their goods.

MESSRS. JAS. MURRAY & SON, 40 to 44 York street, have been very busy during the past month, building new machinery for brick manufacturers. They have also quite a liberal amount of repair work on hand.

MESSRS. R. M. SPEDDEN & CO., South Broadway, have just begun work on two steamships, which are undergoing repairs, and report engagements made for others. They are also building two tug boats for parties in the city. The repair work department of their shops is crowded.

THE Vulcan Iron Works, of this city, well-known for many years, have resumed operations under the ownership of Mr. H. R. Hazlehurst. These works are fitted with a very complete plant, the machinery and tools being of the best character. For many years the Vulcan Works have been turning out a large amount of heavy work, bridge building, water-works machinery, iron vessels, &c., as well as the general run of machinery, such as boilers, engines, tanks, &c., and for all kinds of such work they are now fully equipped. Estimates will be furnished by Mr. Hazlehurst upon application.

MR. W. C. WOLFE, a mechanical engineer and draughtsman, offers his services, through an advertisement in to-day's paper, for making scientific tests and investigations of engines and boilers, to secure the greatest economy of steam and fuel. Mr. Wolfe is also agent for the well-known Ball Automatic Cut-off Engine.

As a fuel for manufacturers coke is very valuable, provided it is of good quality, and then it gives much satisfaction, but an inferior grade simply prejudices consumers against coke in general. The Connellsville coke is everywhere accepted as the best that can be had, and the heaviest coke manufacturer in the Connellsville region, as well as in the country, is the well-known H. C. Frick Co. Their coke is regarded as the standard. It can be had either in the lump or crushed. Within the last few years this coke has come into very general use in Baltimore among manufacturers, as well as by private families. It has given excellent satisfaction, consumers finding it of the best quality. Mr. W. J. Chapman, corner York and William streets, controls the Frick coke in Baltimore.

IN GENERAL.

A FEW moments call by a representative of the MANUFACTURERS' RECORD at the works of the Armington & Sims Engine Co., Providence, R. I., elicited the following information as to work being done: They are quite busy getting up all sizes of their celebrated quick-acting steam engines for electric lighting and other work. The new government cruisers will be furnished with the Armington & Sims engine for electric lighting; also the magnificent new yacht built by the Astors. The Saratoga Electric Lighting Co. have ordered two engines 9 $\frac{1}{2}$ diameter, 12-inch stroke, about 50-horse power each. The Armington & Sims Co. are building for Lee, Blackburn & Co., of Lawrence, Mass., a 90-horse power engine, 12 $\frac{1}{2}$ diameter, 20-inch stroke. The Arlington Mills at Lawrence have just started up (May 8th) a 200-horse power engine of this make. The Armington & Sims Engine Co. now manufacture all the large sizes of their engines, a work which was until recently a specialty of the Builders' Iron Foundry of Providence.

HOWARD, BULLOUGH & RILEY, of Boston, have received order for one of their improved cylinder slashers from the Tallasee Falls Mfg. Co. This machine has all their patented improvements, including the "slow motion," "revolving presser," etc.

What Protection Has Done.

From the speech of Hon. William McKinley, Jr., of Ohio, on the Morrison Bill, April 30.

The growth of this country in the last twenty years is the wonder of the world. Our manufacturing products have increased from \$1,885,000,000 in 1860 to \$5,369,000,000 in 1880. The agricultural development shows a like gratifying progress. There was an increase in the acreage in farms from 407,000,000 acres in 1860 to 536,000,000 acres in 1880, an increase of 32%; and in the value of farms an increase from \$6,645,000,000 in 1860 to \$10,197,000,000 in 1880. We started in 1830 with 23 miles of railway. In 1860 we had 30,635 miles; in 1880 we had 93,545 miles; in 1881 we had 103,334 miles; and now we have about 120,000 miles. Our material wealth has increased beyond parallel in everything which goes to make a nation strong and self-dependent. The energies of our people have opened up new avenues of industrial development and have overcome what seemed insuperable barriers. The finances of the country were never in better condition than to day.

Our exports during the last fiscal year were over \$804,000,000, as against \$733,000,000 during the preceding year, an increase of over \$71,000,000. The value of the exports of manufactures from the United States during the last year was \$112,000,000 in round numbers, as against \$103,000,000 during the preceding year, and exceeded the exports of any previous year in the history of the country. Our exports have exceeded our imports over \$100,000,000, so that the balance of trade is in our favor. We are rapidly reducing the national debt, and have been doing so for years at an unexampled rate. Interest charge has been reduced, and we present the spectacle of a government, in less than twenty years from the close of a great, destructive and wasteful war, with unprecedented credit and a surplus of revenue in the treasury.

This has all been accomplished during an era of protective tariffs, which the free traders characterize as extortion and robbery upon the people, destructive of their energies, and obstructive of industrial progress and national development. How it contrasts with the low tariff period from 1847 to 1860, when we had practically a revenue tariff, such as is advocated by the democratic party of to-day. It was a period of universal business depression,

deficiencies in the public treasury, when both nation and individuals were compelled to borrow money at the most exorbitant rates of interest.

* * * * *

Agriculture and manufactures should go hand in hand; the one enriches the other, the one trades with the other,—they are mutually dependent one upon the other. There is no conflict of interest. Agriculture increases in its products and its wealth with the growth and increase of manufactures. Prices are better, steadier and more reliable to the farmer with prosperous manufacturing industries employing labor which consumes and does not compete with his products. Impair or destroy our ability to manufacture, strike down any of our great manufactures, and the farmer would be the first to seriously feel the loss. Dismiss the army of operatives from the workshop and send them to the great unoccupied and fertile lands of the West, and the farmer would not only lose just so many consumers or customers, but, more than that, he would find them as his competitors in the field of production.

Work on the Panama Canal.

MR. A. B. Stetson, Superintendent of the Pound Manufacturing Company, Lockport, N. Y., has just returned from Panama, where he has been residing during the last seven months superintending the erection of dredging machinery made by his firm for the Panama Canal Company. From Mr. Stetson, who spent an afternoon in this office, we obtained interesting information regarding the progress of the stupendous work of cutting the Panama Canal.

The work of constructing the canal is of much greater magnitude than even the engineering world understand. For seven miles on the Panama end, and for three miles at the Colon end, the width of the canal is 676 feet; while for the middle seventeen miles it is 388 feet wide, the whole having a uniform depth of 30 feet. In certain parts the physical features of the country entail tremendously expensive excavations. The Chagres river bed is crossed several times, and provision must be made to control the waters of that river, which is a great undertaking in itself, for the river is subject to huge floods during the rainy season, and this water must be kept out of the canal. The line of the canal crosses a hill which is 350 feet high, entailing a cutting of that depth for over three miles. As the hill is all soft material, the top of the cutting is surveyed 1,600 feet wide, and it is doubtful if that slope will be enough to prevent bad earth slides.

A great deal of expensive preliminary work has been done connected with the canal, substantial dwellings and hospitals having been erected. The work has been divided into twelve divisions, and excavating is now proceeding in every division. There are about 20,000 men engaged on the works, most of them being Jamaica negroes, and they are miserably inferior laborers. A number of natives are also at work, and they are a shade better than the importations from Jamaica, still they are far from being industrious.

Two of the dredging machines made by the Pound Manufacturing Company have been at work for several months, each of them taking out 1,300 cubic yards daily. Two more machines are nearly ready. The heaviest machines on the works are the bucket dredges belonging to the Panama Canal Excavating Company, of New York. One of these dredgers, which was built at San Francisco, has been at work for some time, taking out as much as 7,800 cubic yards daily. Two more of these huge machines have been built on the Delaware and sent out. The second to arrive was burnt by accident, but the third one is now ready for work. These machines work admirably in the earth work for which

they were built, but several attempts have been made to apply them to the excavation of rock, boulders and tree-stump covered ground, and there they do not work well.

French interests are all-powerful on the Panama Canal Works, all the men doing intellectual and skilled labor employed by the company being French. Machinery that has not been made in France is condemned from the beginning, and every effort is made to discredit its working. American, English and Belgian machinery all fare badly in the hands of these French operators, who are determined to see no great merit in any foreign-made article. They have succeeded in damaging the reputation of every foreign-made machine they have handled, except the American locomotive. The American locomotive is so well adapted to withstand the rough usage of rude construction work that the French engines engaged in the same service were helpless in comparison. The French engineer would abuse and revile the American locomotive without limit, but it kept to work and held the track day by day, while its French rival was in the ditch or in the shop; so the officers of the company were reluctantly compelled to admit that the American locomotive was the best for their work.

The Panama Canal Company have now got entire control of the Panama Railway, and they are improving the condition of the road bed, which was in extreme bad order. Over 400 men are working on the 27 miles of track, putting down new rails and ties, also draining the road bed.

There does not seem to be much likelihood of the present company finishing the canal. Of the \$114,000,000 originally subscribed for, to complete the work, two-thirds have already been spent, and the real work of excavating the canal has hardly been commenced. The total amount of material to be moved is estimated in the neighborhood of 140 millions cubic yards. Not more than 5 $\frac{1}{2}$ million yards have been moved and the greater amount of that has been confined to earth work and dredging. More than half of the excavation is rock, and that has hardly been touched yet. The farther this work proceeds, the magnitude of the enterprise appears the greater. Extraordinary exertion will be needed to finish the work within ten years instead of four, the time now spoken of.—American Machinist.

Heavy Failures.

Just as the last forms of our paper are ready for the press, the telegraph brings word of many heavy failures in New York. Wall street is crowded with excited people, and the prospects are decidedly unpleasant looking, but possibly worse troubles may be averted.

MR. JOHN R. EDWARDS, blank book manufacturer, having found his quarters at the corner of Baltimore and North streets inadequate to the demands of his increasing business, has removed to the new warehouse 169 and 171 West Lombard street, corner Sharp. With ample room, all the latest improved machinery, a long practical experience and skilled workmen, he can produce work equal to that of any establishment in the country, and at reasonable prices. He carries in stock an extensive assortment of blank books and a full line of stationery.

WHEN you go to Cincinnati stop at the Palace Hotel. You will find comfortable well-furnished rooms, good meals, polite and accommodating attendants,—everything, in fact, calculated to promote your comfort and make your stay pleasant. It is a new hotel, and everything about it is new, fresh and attractive. The charges are as low as those of any other first-class hotel.

The Garden Spot.**Spartanburg and Her Industries.**

SOUTHERN DEPARTMENT
BALTIMORE MANUFACTURERS' RECORD,
SPARTANBURG, S. C., May 9, 1884.

This town of 4,500 people, Spartanburg, in Spartanburg county, South Carolina, is one of the important, progressive and promising places of this booming State.

This county is the fourth manufacturing county in the State, and is stated by the Charleston News and Courier to be the first in cotton factory capital. It is an important railroad point, being directly on the line of the main trunk line of the Richmond & Danville Railroad, between Atlanta and Charlotte, 200 miles from Atlanta and 65 miles from Charlotte. It has for years been connected with Columbia by a direct road—the Spartanburg & Union Railroad, which joins the Columbia & Greenville Railroad at Alston. These two roads are now under the management of the Richmond & Danville system. In addition to this, the Spartanburg & Asheville Railroad is completed 50 miles to Hendersonville, and the remaining 21 miles from Hendersonville to Asheville are nearly graded. The Richmond & Danville Road has leased this valuable line, which gives a direct Western outlet, and will complete the link this year. But this is not all. The Augusta & Knoxville Railroad, running North and South and controlled by the Central Railroad system, is completed to Greenwood on the Greenville & Columbia Railroad, 68 miles from Augusta, and graded from Greenwood to Spartanburg through Laurens 60 miles, and this link will be completed this year. It is also proposed to extend this road to Rutherford or Shelby in North Carolina, and a company has been organized for this purpose, with Mr. L. Mills as president, and the survey is being made.

It will thus be seen what an important railroad place Spartanburg will be. To all of these railways the Spartanburg people have liberally contributed.

Spartanburg county is both a fine manufacturing and farming country. It has 94 manufacturing establishments divided as follows:

No.	Hands.	Capital.	Products.
Cotton mills.....	7	\$1,100	\$1,300,000
Flour, &c., mills.....	50	100	50,000
Foundries.....	2	75	30,000
Lumber mills.....	20	80	15,000
Others.....	15	40	16,000
Total.....	94	1,325	\$1,144,000
			\$1,110,000

There are seven cotton mills, with a capital of \$1,043,000, consuming annually 16,820 bales of 8,410,000 pounds of cotton; running 37,680 spindles and 9.5 looms, and making 1,869,275 pounds of yarn and 16,273,500 yards of cloth, at a net profit of 11%.

The cotton mills are located at Clifton, Glendale, Pacolet, Fingerville, Crawfordville, Valley Falls and Cedar Hill.

I have visited the two new mills—the one at Clifton, built in 1880, of which Mr. Converse is president, and the one at Pacolet, just completed, of which Capt. J. H. Montgomery is the president.

The Pacolet Mill has 10,000 spindles and 300 looms, and makes a finer cloth than is generally manufactured South. It makes a cloth of 4 yards to the pound. This mill site was used for a grist mill and was a dead cross-roads point. The three enterprising gentlemen—Col. Jos. Walker, Dr. Fleming and Capt. J. H. Montgomery—comprising the firm of Walker, Fleming & Co., in Spartanburg, originated this enterprise. Col. Walker selected the site and bought it. These gentlemen raised the money and built the mill. Spartanburg subscribed \$139,000, \$56,000 was raised in other points of Carolina, \$12,000 in North Carolina, and the remaining \$93,000, or less than one-third, was subscribed by Northern capitalists. The place is now a thriving village of 500 inhabitants. The water power will run 25,000 spindles, and

an additional mill can be built and will be built.

The mill cost \$30.12 a spindle. There is room for 2,000 more spindles in the building, which will be put in, and the cost thus reduced to \$26 a spindle. The mill is a model in every respect. It turns out 15,000 yards of cloth daily. Among other points it is shipping cloth to Shanghai, China. The dam is substantial and all ready for a new mill. The foundation for a new mill is also partially ready. The dam and foundation of the mill are built of rock quarried right out of the bed of the river. A reservoir above the mill of 120,000 gallons of water furnishes protection in case of fire. The work was built under supervision of Capt. J. H. Montgomery, the president, and is a monument to his fine management.

The Clifton Mill has 21,000 spindles and cost \$600,000. Clifton has a population of 1,400 people.

The father of cotton mills in this section was Dr. James Bivings. He built the mill at Glendale. This place was called Bivingsville, in honor of this old citizen, but after his death the mills were renewed and the name of the place changed from Bivingsville to Glendale. Dr. Bivings also built and run for many years the mill at Crawfordsville.

There are in Spartanburg county 2 iron foundries, 3 brick-yards, 4 wagon factories, 2 tanneries, 1 sash factory, 1 lime kiln, 1 distillery, &c. There is also a soapstone quarry and a gold mine.

There are 153,087 acres of land in cultivation. Much attention is given to improved stock. There are in the town of Spartanburg two Jersey cattle farms, one by Mr. S. Miles of 30 head, and one by Mr. Irwin of 7 head. In the county are 200 registered Jersey cattle. Many of the farmers and town citizens have their registered Jersey milk cows. Col. Jos. Walker keeps one, a very fine heifer.

Quite a number of new, elegant, modern residences have just been completed, costing from \$10,000 to \$15,000. Among these are two elegant dwellings by Hon. John B. Cleveland and Dr. Jesse Cleveland, wealthy brothers. Col. Jos. Walker and Dr. Fleming are building handsome homes. Spartanburg has a flourishing male college with 125 students—Wofford College, under charge of President Carlisle and a fine faculty. There have been here a female college and a military college. The buildings are still standing, and these institutions will probably be reopened.

I took a trip up the Spartanburg & Asheville Road to the famous Flat Rock settlement, near Hendersonville. This Flat Rock section has been for half a century the summer home of the distinguished men of South Carolina. The settlement is filled with beautiful homes and exquisite grounds, that have been owned by the Pinckneys, Memmings, Middletons, Draytons, Barings, Kings, Rutledges, and other notable families. Mr. Memming, ex-secretary of the Confederate Treasury, still spends every summer at the beautiful home that he built 40 years ago, and drives up a magnificent avenue of stately pines, winding for a quarter of a mile, that were put out by himself. He has a superb lawn rolling down to a clear lake, and the view from his house is very fine. The most noted place is a farm of 400 acres, with a picturesque rock castle, located upon a beautiful eminence, that was improved by a wealthy French nobleman, the Count du Choiseul, who was for a while consul at Charleston. His house cost him \$20,000. He had conservatory and grapevines. He entertained in princely style. Upon his death the place was sold to a Col. Urquhart, of Louisiana. Four years ago it was bought by Col. Jos. Walker, of Spartanburg, who has put it in fine condition.

I rode down the road on the engine. The track runs through a gloriously pictur-

esque country. For 3 miles the grade is 370 feet to the mile, and winds around the mountain gorges, curving through the clouds, spanning great chasms, and catching glimpses of scenery of supernatural loveliness. This is a wonderfully lovely region, and possesses an electrically bracing climate. It is the summer resort unsurpassable. There is a good hotel built here. The elevation is about 2,500 feet above the sea level. The completion of this road not only opens up as good a summer country as the world affords, but connects the seaboard with the West by a new great trunk line. I. W. AVERY.

Tin in West Virginia.

HUNTINGTON, W. VA., May 8, 1884.
Editor Baltimore Manufacturers' Record:

Your favor duly received. I will with pleasure give you my experience in the mineral regions of West Virginia. I purchased in 1865 a tract of land located in Mason and Cabell counties, of 12,500 acres. In September, 1879, I commenced to explore for minerals; on the 29th of the month discovered what I supposed was silver, erected a rude furnace only 8 inches inside, made an assay, reduced the ore one hour and forty minutes; got out about one pound; sent it to New York, claiming for it silver. Ball, Black & Co. said "not silver, but tin of a superior quality." Subsequently made various assays, with like results. Last September I blasted out some 20 tons of the tin stone, partially roasted. Winter and the floods of the Ohio river stopped all our work; not by the water, for our mines are above the highest water.

The tin stone crops out on a high hill, thence traced regular in veins and boulders, one above another. We traced it some five miles; it would crop out occasionally within the space named. The tin stone is inexhaustible enough to last 800 years, more or less, for a dozen furnaces to run day night and on our lands. We find cinnabar in large quantities, millions of tons, very rich. I have sent to Cincinnati for crucibles to reduce the nickel, and iron retorts to get out the quicksilver. We are preparing to open the works on a large scale. We expect to get our crushers and machinery under contract in the course of the next 60 days. This tin stone being the first in quantity discovered in the United States. I believe it is conceded to be the first tin mine in America. The writer was the first to discover it and feels some pride in that fact.

I am giving you the particulars fully, and as we progress will give you further information in detail.

I have nickel; we tried that and found it rich. When the crucibles come up from Cincinnati we will reduce the nickel and give the quantity to be found in the ore.

We formed a company, \$3,000,000 capital, non-assessable, fully paid up.

Yours truly, R. N. ROBBINS.

Some North Carolina Items.

HOLMAN'S MILLS, N. C., May 7, 1884.
Editor Baltimore Manufacturers' Record:

As you kindly solicit information as to what has been done and is doing in the South, I thought that I would volunteer some points that might be of interest about the two places of Snow Camp and Holman's Mills.

First—Snow Camp. We have Cane Creek Friends' Church, where Cornwallis and his troops camped on their retreat from the battle of Guilford; next, Dixon's Mills, of Revolutionary fame, where the British soldiers helped themselves to grain, but failed to get either meal or flour, as the miller had left and had taken the precaution to let the stones together, and, as there was no miller amongst the British

soldiers, they were unable to get the mill to run, and, after expending all their skill on the mill, they left without either meal or flour.

This same mill is now owned by H. W. & T. C. Dixon, and is to have a general repair this season. Next, Snow Camp Foundry and Machine Shops and Saw Mill, owned and operated by Dixon & Co.; Dixon's Tannery, owned and operated by S. Dixon & Co.; with other mills and tanneries.

Second—Holman's Mills. We have Fairmount Foundry and Machine Shops and Saw Mill, owned and operated by Stafford, Henley & Co., at which place the first circular saw mill in North Carolina was built in the year 1854, and at which place first-quality turbine water wheels and circular saw mills can now be had; next, Clover Orchard Cotton Mills, Flouring and Saw Mills, now owned and operated by the Holman Manufacturing Co.; next, the Stout Whetstone Quarry, of excellent quality, with soapstone near by; then, gold and iron ore, &c., with good or fair land, and quantities of oak and other kinds of timber. The tendency of this section is upward, and I think capital could find safe investment here. Yours respectfully,

N. S.

The Value of Construction Items

Manufacturers fully appreciate the value of good, newsy trade items—items that are crisp and to the point. "I take a Baltimore paper," remarked a large pulley manufacturer the other day, "simply because of the valuable trade items it contains, and that paper," pointing to a copy of the American Machinist, "for its manufacturing notes, though, of course, there are people who take it for its mechanical matter. Items relating to fires, business changes and improvements are of the most value to me; they offer me opportunities to introduce my goods where they have, perhaps, never been used."—St. Louis Age of Steel.

[The Baltimore paper referred to is the MANUFACTURERS' RECORD.]

ALTHOUGH not positive about it, we believe that the MANUFACTURERS' RECORD was the first paper in the country to suggest the advisability of pecuniary help to the New Orleans Exposition by the national government. The proposed loan of \$1,000,000, which is now almost sure, is, therefore, peculiarly gratifying; and not only the people of the South but the whole country should rejoice at the assurance that this exposition will be a magnificent success, reflecting lasting credit upon the United States. It seems certain that in many respects this exposition will be the grandest work of the kind that the world has yet seen, surpassing in many things even the nation's supreme effort at Philadelphia in 1876.

Important to Southerners.

Persons arriving in New York via Cortlandt Street Ferry, by taking the 6th Avenue Elevated Train, corner Church and Cortlandt streets, can reach the Grand Union Hotel in 42d street, opposite Grand Central Depot, in twenty minutes, and save \$8 carriage hire. If en route to Saratoga or other summer resorts via Grand Central Depot, all baggage will be transferred from hotel to this depot free. 600 elegantly furnished rooms \$1 and upwards per day. Restaurant the best and cheapest in city. Families can live better for less money at this hotel than at any other first-class hotel in the city.

Iron Making in Southwest Va.

Mr. R. B. Porter, writing from Southwest Va. to the Philadelphia Press, says:

The mines, however, along the New River and Cripple Creek are destined to produce an ore which, when the latest modern methods are applied to smelting it, should not exceed in cost \$11 a ton. This estimate is made as follows:

Ore, $\frac{3}{4}$ tons, at \$1.90.....	\$ 3.40
Coke, $\frac{1}{4}$ tons, at \$3.10.....	3.88
Limestone.....	.50
Labor.....	2.00
Incidentals.....	1.25
	\$11.03

Pig iron can undoubtedly be made here with modern appliances so that it can bear long transportation to markets, and then compete with Pennsylvania pig. As I have shown, the ores are abundant, of good quality, easy of access, and most of the deposits within short distance of railroads. Water is plentiful, limestone near at hand, and coke obtainable at reasonable cost.

There are now in the Cripple Creek District, which I visited yesterday, twelve or fourteen old-fashioned charcoal blast furnaces, and all of them back from the railroad. The establishment of large coke furnaces in this district is now assured. I met a Philadelphia gentleman on the train who is contemplating building a 100-ton coke furnace and two zinc works in the district. The building of the Cripple Creek extension of the Norfolk and Western Railroad is in progress and will be completed this year. This will be a loop line, leaving the main stem just below Martin's, and extending through this rich iron and zinc region. Indeed, the main line of the Norfolk & Western Railroad should have gone through the country, and would have done so had it not been for the log-rolling of some influential politicians of the pretty little town of Wytheville, who insisted that it should run through that place. The minerals of this Cripple Creek District have been mined for over a century, and I believe some of the furnaces may be that old. Certain it is that the Wythe Lead and Zinc Mines have been worked over 100 years. These works used an old shaft as a "shot tower," and turn out several tons of shot a day. They employ 150 miners, mostly white, and pay them from \$1 to \$1.25 per day.

At Martin's I found zinc works and a number of men engaged in making spelter. Just below here will be built the new town of Pulaski, at the points where the New River & Cripple Creek Railway leaves the main stem. Already capital has been raised for a new blast furnace and two zinc works, which will be conveniently located for the ore mines of Cripple Creek and the coal and coke of the Great Flat Top coal region, with its vast stores of the purest coal and one which promises to yield a coke equal to the demands of large modern furnaces. I refer to what is better known, through the late sad accident, as the Pocahontas district. The branch road to this coal country leaves the Norfolk & Western a few miles this side of the site of Pulaski.

THE MARKETS.

OFFICE MANUFACTURERS' RECORD, }
BALTIMORE, May 14, 1884. }

The defeat of the Morrison Tariff Bill tended to impart a better feeling to the iron market, but the heavy failures in New York and in the Northwest have rather worked against any improvement. It is a matter for congratulation, however, that these enormous failures have not produced more trouble in financial affairs than has so far been seen. The outlook for the year's crops, or for those far enough advanced to judge of, is remarkably favorable, and there are good reasons for looking forward to abundant harvests. If the country should be blessed in this way, an impetus would necessarily be given to business, and we might then look for a decided revival in trade circles generally.

In manufactured iron, trade is unsatisfactory and prices are cut so low as to leave but little margin of profit. We quote nominally as before, viz:

Ref. Bar Iron, 1 to $6\frac{1}{2}$ to 1.....	1.9@ 2 c
" 1 to $4\frac{1}{2}$ x 1 to 1.....	1.9@ 2 c
" A to 2, round and square.....	1.9@ 2 c
Hoop Iron, 1 $\frac{1}{2}$ wide and upward.....	3.8@ 3 c
Band Iron, from 1 $\frac{1}{2}$ to 6 in. wide.....	2.5@ 2.6 c
Horseshoe Iron.....	3.8@ 3.8 c
Norway Nail Rods.....	5 @ 5 c
Black Diamond Cast Steel.....	10 @ 11 c
Machinery Steel.....	4.5@ 4.5 c
Spring Steel.....	3.8@ 4 c
Common Horse Nails.....	10 @ 11 c
Railroad Spikes, 5 $\frac{1}{2}$ x 16.....	2.5@ 2.6 c

The local demand for pig iron continues inactive, and the volume of business is only moderate at former prices, viz:

Baltimore Charcoal Wheel Iron (all Baltimore ore).....	\$28.00@29.00
Virginia C. B. Charcoal Wheel Iron.....	21.00@23.00
Anthracite, No. 1.....	21.00@23.00
" 2.....	20.00@21.00
" 3.....	18.00@20.00
" Mottled and White.....	16.00@17.00

HARDWARE.

The general hardware trade of the country is reported as unsatisfactory, advises from New York saying that business is really very dull. In our market there is considerable activity on Western business, orders from that section being more numerous than for a long time, but the Southern trade is very dull. Our dealers do not seem to anticipate much improvement until after the 1st of July, when, if any changes in prices are to be made, they will probably take effect then. The prospects are good for an unusually large yield of wheat in the South, and this will somewhat stimulate business during the summer months, but we do not look for any marked increase in Southern buying until the cotton crop is near enough assured to enable good calculations as to its outturn to be made. If this crop—the main dependence of the agricultural classes at the South—is large, the South's general trade during 1884-'85 will be greater than ever before.

Prices of hardware are practically unchanged, though our quotation for Buck Thorn Fence wire is reduced 4c., which is not, however, an actual decline in price. Nails continue quiet, with demand only moderate at \$2.50@2.60, according to quantity.

Philadelphia Iron Market.

PHILADELPHIA, May 12, 1884.

The business of the past week has been barely satisfactory as to volume, and far from satisfactory as to price. The downward tendency noted last week still exists, although partially arrested by the encouragement imparted to the trade by the removal of the disturbing effects of tariff agitations. A fair movement has taken place in the standard and special brands of forge and foundry iron, and for these prices have been firm at the usual figures, viz: \$20 to \$21 for No. 1 foundry, \$19 for No. 2, and \$18 to \$18.50 for Gray Forge, but for the inferior irons that are offered prices have been low and weak, and \$19.50, \$18 and \$17.50 respectively have been taken for the three kinds. One or two sales of red short iron have been made at about \$18, delivered. There is very little inquiry, and buyers are generally indifferent; requirements are not heavy, and consumers of all kinds of iron are sure that when they want supplies there will be no difficulty about obtaining them. A few large sales of foreign iron are reported, but demand and inquiry are, in general, dull; Bessemer would sell at \$19.50 to \$19.75; sellers ask 50 to 75 cts. more; spiegeleisen is quoted at \$28.50 for 20 per cent. 1,000-ton lots have sold at \$28. At New York muck bars are selling slowly at \$32 for a good make; inferior \$31.

Manufactured iron of all kinds is quiet and weak. Bars are selling at 1.70 to 2 cts., according to quality and size of order. Plate and tank are quoted at 2.15 to 2.20 for plate and tank, 2.75 for shell, 3.75 for flange, and 4.75 for fire box. Structural

shapes are moving in small lots at 2.20 for angles, 2.25 for bridge plates, 2.75 for tees and 3.50 for beams and channels. Nails are selling at \$2.50 to \$2.60 in small lots; large lots have been sold at considerably less, although the exact figures are not known.

Steel rails are being ordered in small lots for summer delivery at \$33 to \$33.50. There are large buyers who have made offers at \$32 and under, but no transactions on those terms have been closed. Buyers are waiting patiently, however, sure of being able to secure their own terms after a little while. Old rails may be quoted at \$21.50 to \$22.50. One or two large lots have sold at \$21, and small lots are selling from \$22 up, but demand is very irregular.

The demand for wrought iron pipes seems to be a little more active, and makers are booking orders for summer requirements. Prices are firmly held at the combination rates. Scrap is dull. No. 1 wrought has sold at \$23.50; cargo lots are nominally \$22.

Cincinnati Iron Market Report.

Specially reported by ROGERS, BROWN & CO., Pig Iron Commission.

CINCINNATI, May 12, 1884.

There has been rather more free buying during the past week, but the market is still without animation, and the volume of business is below the average. The yards of the furnaces are more bare of stock than usual at this season of the year, and offerings are light. One or two furnaces have lately gone out in the South and two in the Virginia district. Rolling mills are not buying beyond the first of June, believing a strike to be inevitable at that time. Foundries, as a rule, are running light, though there are some important exceptions. Stocks in consumers' hands are lighter than they have been for years. The general situation, indeed, is such that should any improvement in general business occur, the reaction would be quick in iron trade. Most producers of pig iron are selling now without profit, and many sales are known to be actually net loss. We quote for cash f. o. b. cars Cincinnati:

HOT-BLAST FOUNDRY.	
Hanging Rock C. C., No. 1.....	\$21.50@23.00
" 2.....	19.50@22.00
Southern.....	20.00@23.50
Strong Coke.....	18.50@19.00
" 2.....	17.25@17.75
" 3.....	17.00@17.25
Soft Stone Coal.....	18.50@19.25
" 2.....	17.00@17.75
FORGE.	
Strong Neutral, No. 1 Mill.....	16.00@16.50
Cold Short.....	15.00@16.00
CAR WHEEL AND MALLEABLE.	
Hanging Rock C. B.....	30.00@31.00
" W. B.....	30.00@24.00
Southern Car-Wheel Iron.....	24.50@26.50
Lake Superior.....	24.00@25.50
" Malleable.....	24.50@25.50

Specially reported by E. L. HARPER & CO.

CINCINNATI, May 12, 1884.

While the general demand is somewhat limited, the orders aggregate fully up to the season's usual business. In a quiet way considerable buying has been going on, and in consequence prices on reliable brands are being well sustained. The annual conflict between the rolling mill proprietors and their men will probably result in closing down the mills, the workmen insisting upon the same scale of wages existing when the mill product sold at fully \$15 per ton above current prices. Should the mills accede to the demand of the Amalgamated Association, who will pay the loss—the consumers of manufactured iron or the producers of crude iron? We are pleased to note that the prospect of a strike is giving the manufactured market a much firmer aspect. We quote as prices current:

FOUNDRY.	Four Months.
Hanging Rock Charcoal, No. 1.....	\$22.25@23.25
" 2.....	21.25@22.25
Strong Neutral Coke.....	18.50@19.00
" 2.....	17.25@17.75
American Scotch.....	18.50@19.00
GREY FORGE.	
Neutral Coke.....	16.50@17.00
Cold Short.....	16.25@16.75
CAR WHEEL AND MALLEABLE.	
Hanging Rock, strictly cold blast.....	—@27.25
" warm.....	24.00@24.50
Lake Superior Charcoal, all grades.....	24.00@25.00
South. Car Wheel, strictly cold blast.....	26.00@26.50

Louisville Iron Market.

Specially reported by GRO. H. HULL & CO., Commission Merchants for the sale of Hot and Cold Blast Pig Iron.

Louisville, Ky., May 12, 1884.

The market is without change in tone. There is still considerable iron being used by the foundries and mills, but they are buying only to suit their actual needs.

**DROWNE & POLLARD,
MILL ENGINEERS**

Butler Exchange, Providence, R. I.

Plans, Specifications and Estimates furnished for the Construction, Equipment and Operation of MILLS, BLEACHERIES AND DYE WORKS.



THE LARGEST & BEST EQUIPPED IN THE SOUTH.

ISAAC FRIEDENWALD'S
EMPLOYING ABOUT 150 ARTISTS & SKILLED WORKMEN.

PRINTING,
LITHOGRAPHING AND *

COMMERCIAL STATIONERY, CERTIFICATES, BONDS, &c.

ENGRAVING
ESTABLISHMENT,

WOOD, METAL, PHOTO. & LINE ENGRAVING OF EVERY DESCRIPTION

99-103 W. FAYETTE ST.
LEADING FIRMS OF THIS SECTION—OUR REFERENCES.

BALTIMORE, MD.
CORRESPONDENCE SOLICITED—ESTIMATES CHEERFULLY FURNISHED.

**SHEET IRON
ROOFING.**

Northrop's Patent Cap Seam Iron Roofing.

No rivets, screws or nails through the sheets. Easily applied and perfectly watertight.

CRIMPED IRONS

of various styles for Roofing and Siding.

IRON CEILING.

ORNAMENTAL, DURABLE, FIRE-PROOF.

A. NORTHROP & CO.

97 First Avenue,

PITTSBURGH, PA.

Baling Press

BY HAND OR POWER.

FOR COTTON, WOOLEN OR PAPER FACTORIES.

—ALSO—

Lard, Tallow, Oleo., Paraffine, Cotton Seed, Castor Oil, and many other kinds of Presses. Send for circulars.

BLOMER & BOSCHERT PRESS CO.

Syracuse, N. Y.

—OR—

219 Fulton St., New York City.

The volume of business, however, is very satisfactory. Prices remain firm, with some slight advances on some grades and some slight declines on others. We revise quotations as below:

PIG IRON.

Southern Coke, No. 1 Foundry.....	\$18 50@19 00
" " 2 " "	17 50@17 75
Hanging Rock Coke, No. 1 Foundry. 10 50@20 50	
" Char'l. " " 22 00@23 50	
Southern Charcoal, No. 1 Foundry .. 19 00@21 00	
Silver Gray, different grades..... 15 50@17 50	
Southern Coke, No. 1 Mill, Neutral. 16 00@16 50	
" " 2 " " 15 50@15 50	
" " 1 " Cold Sh't 15 50@16 10	
Southern Charcoal, No. 1 Mill..... 14 00@18 00	
White and Mottled different grades 14 00@14 50	
Southern Car Wheel, stand brands. 26 00@27 00	
" " other brands..... 22 00@24 00	
Hanging Rock Cold Blast..... 27 00@28 00	
" Warm " 21 00@28 00	

Specially reported by W. B. BELKNAP & Co., Nails, Wire, Iron, Hardware, Carriage and Wagon Goods.

LOUISVILLE, KY., May 12, 1884.

There is a better feeling in iron circles incident to the defeat of the Morrison bill, but no special demand is manifested.—There is no cutting of prices below those of the winter, and they are beginning to be accepted as bottom. The mills hereabouts do not brag of full order books, but claim that enough come in from day to day and from week to week to keep them employed single turn. A lull in the discussion of June stoppage would go to indicate that possibly some serious work is being done. These views of the outcome have been presented to us by equally intelligent manufacturers.

1st. That there will be a demand for a large reduction that will lead to a protracted lockout.

2d. That owing to lack of unity among the manufacturers, no attempt at change worthy the name of effort will be made. The buyer who wishes to trim his sails accordingly, may take his choice.

Sheet iron—Mills generally are sold up to June 1st, and will take no orders for later delivery except subject to cancellation in event of strike.

Nails.—A better demand prevails, and prices are steady; still the consumption is not as large as was expected. Movement in farm goods, implements, &c., has been good, though the season is backward.

Carriage goods are duller than usual.

St. Louis Iron Market.

Specially reported by HOPPER & Co., Pig Iron and Iron Ore, No. 318 Olive Street.

ST. LOUIS, May 12, 1884.

This market continues dull, and is without features of interest. We quote:

HOT-BLAST CHARCOAL.

Missouri.....	\$19 00@20 00
Southern.....	30 00@22 00
Ohio.....	24 00@26 00

COKE AND COAL.

Missouri.....	19 00@20 00
Southern.....	19 50@19 50
Ohio.....	21 00@25 00

MILL IRONS.

Red Short.....	17 00@18 50
Neutral.....	16 00@17 00

CAR-WHEEL AND MALLEABLE IRON.

Missouri.....	19 00@20 00
Southern.....	25 00@28 00
Ohio.....	23 00@31 00

Iron, par.

Derby Roll Top Desks.

Best Office Desk in the World.



Cherry, Walnut, Oak, Ash and Mahogany.

Send for Illustrated Catalogue.

DERBY & KILMER DESK CO.

55 Charlestown St., Boston, Mass.

Chattanooga Iron Market.

Specially reported by S. B. LOWE.

CHATTANOOGA, TENN., May 12, 1884.

The pig iron market still remains dull, with perhaps a few more inquiries. Since the settlement of the "Morrison bill" there is only a fair trade in standard lines, and collections of old accounts are slow. The Tennessee Handle Factory are rebuilding their works upon a much larger scale than before, and will be in full blast by July 1st. We make some changes in quotations:

No. 1 Foundry.....	\$17 50@18 50
" 2 " "	17 50@17 75
Hanging Rock Coke, No. 1 Foundry. 10 50@20 50	
" Char'l. " " 22 00@23 50	
Southern Charcoal, No. 1 Foundry .. 19 00@21 00	
Silver Gray, different grades..... 15 50@17 50	
Southern Coke, No. 1 Mill, Neutral. 16 00@16 50	
" " 2 " " 15 50@15 50	
" " 1 " Cold Sh't 15 50@16 10	
Southern Charcoal, No. 1 Mill..... 14 00@18 00	
White and Mottled different grades 14 00@14 50	
Southern Car Wheel, stand brands. 26 00@27 00	
" " other brands..... 22 00@24 00	
Hanging Rock Cold Blast..... 27 00@28 00	
" Warm " 21 00@28 00	

Specially reported by W. B. BELKNAP & Co., Nails, Wire, Iron, Hardware, Carriage and Wagon Goods.

LOUISVILLE, KY., May 12, 1884.

There is a better feeling in iron circles incident to the defeat of the Morrison bill, but no special demand is manifested.—There is no cutting of prices below those of the winter, and they are beginning to be accepted as bottom. The mills hereabouts do not brag of full order books, but claim that enough come in from day to day and from week to week to keep them employed single turn. A lull in the discussion of June stoppage would go to indicate that possibly some serious work is being done. These views of the outcome have been presented to us by equally intelligent manufacturers.

1st. That there will be a demand for a large reduction that will lead to a protracted lockout.

2d. That owing to lack of unity among the manufacturers, no attempt at change worthy the name of effort will be made. The buyer who wishes to trim his sails accordingly, may take his choice.

Sheet iron—Mills generally are sold up to June 1st, and will take no orders for later delivery except subject to cancellation in event of strike.

Nails.—A better demand prevails, and prices are steady; still the consumption is not as large as was expected. Movement in farm goods, implements, &c., has been good, though the season is backward.

Carriage goods are duller than usual.

METALS.

TIN PLATES.

BLOCK TIN.

" Lamb and Flag," and " Straits."	25
Large Pigs.....	24
Small Pigs.....	23

Bars.....	28
-----------	----

TINNERS' SOLDER.

No. 1 Refined.....	18
Market Half-and-Half.....	15
Strictly Half-and-Half.....	16

ROOFING PLATES.

IC. 14x30, Choice Charcoal Terne.....	5 75
IX. 14x30, " " "	7 75
IC. 20x30, " " "	12 00
IX. 20x30, " " "	16 00
IC. 20x30, Extra fine quality, charcoal roofing, genuine "old style" redipped.....	15 75
IX. 20x30, " " "	19 75

TIN PLATES.

IC. 10x14, Charcoal.....	6 50
IX. 10x14, " " "	8 50
IC. 12x12, " " "	6 75
IX. 12x12, " " "	8 75
IC. 14x10, " " "	6 50
IX. 14x10, " " "	8 50
IC. 14x20, " " "	10 50
IX. 14x20, " " "	12 50
IC. 14x20, " " "	14 50
IX. 14x20, " " "	15 50
IC. 14x20, " " "	17 50
IX. 14x20, " " "	19 50
DC. 100, Plate.....	8 25
DX. 100, " " "	8 25
DXX. 100, " " "	10 25
XXX. 100, " " "	12 25

COPPER PLATES.

IC. 10x14, bright, "B. V." grade.....	5 35
IX. 14x30, " " "	5 35
IX. 14x30, " " "	5 35

SHEET ZINC.

In casks of 600 lbs., "B. V.	6
In smaller quantities, "B. V.	7

BABBITT METAL.

A 1.....	15
No. 1 Ordinary	9
Antimony.....	18
Excelsior Babbitt Metal, No. 2.....	10
" " " 4	9

LEAD.

Pig.....	4 1/2
Bar. (15 oz. bars).....	6 1/2
Sheet.....	7 1/2
Pipe, full coils.....	6 1/2

COFFEE.

Tinned Sheathing, 14x48, 14, 16, 18 oz.....	28
" Planch'd, 14x48, 14, 16 oz.....	40
" Boilers 7, 8, 9.....	42
Copper Pit Bottoms.....	30
Tinning extra.....	15
Brazier Copper, 15 to 100 lb.....	30
" 10 to 12 lb.....	32
" 8 lb.....	34
" 6 lb.....	36
Bolt.....	30
Tinning extra.....	40

PAINTS, OILS, &c.

PAINTS.

Black Lamp, coach painter.....	1/2 lb 30c
Black Lamp, ordinary.....	1/2 lb 6c
Black Ivory Drop, fair.....	12@15c
Black Ivory Drop, best.....	28c
Black Paint, oil, best.....	Reg. 6c; met'd cans, 9c
Blue Prussian, fair to best.....	40@50c
Blue Prussian, fair to best, in oil.....	45@50c
Blue Chinese, dry.....	70c
Blue Ultramarine.....	15@25c
Brown, Spanish.....	1c
Brown, Van Dyke.....	5@15c
Green, chrome.....	8@15c
Green, chrome, in oil.....	1/2 lb 20c
Green, Paris.....	good, 20c; best, 35c
Green, Paris, in oil.....	good, 30c; best, 35c
Iron Paint, bright red.....	1/2 lb 24c
Iron Paint, brown.....	1/2 lb 1 1/2c
Iron Paint, purple.....	1/2 lb 3c
Iron Paint, ground in oil, bright red.....	1/2 lb 5 1/2c
Iron Paint, ground in oil, red.....	1/2 lb 5c
Iron Paint, ground in oil, brown.....	1/2 lb 4 1/2c
Iron Paint, ground in oil, purple.....	1/2 lb 6c
Lined Oil, raw.....	78c
Single Boiled.....	60c
Double.....	62c
Mineral Paints.....	3@4c
Orange Mineral.....	10c
Red Lead, American.....	6 1/2c
Red Venetian, (Eng.) dry.....	\$1.50 to \$1.75
Red Venetian, in oil, "seast'd cans, 9c; kegs, 6c	
Red Indian, dry.....	9@12c
Rose Pink.....	10@13c
Sienna, American, raw.....	4c
Sienna, burnt.....	4 1/2c

W. C. WOLFE,
CONSTRUCTING ENGINEER and Draughtsman

Special Engines, Boilers and Machinery designed and constructed.

Indicator, Dynamometer, Calorimeter and other scientific tests and investigations made of ENGINES and BOILERS, and VALVE GEAR remodeled and adjusted according to the most approved practice, to secure the Greatest Economy of steam and fuel.

Perfecting New Inventions a Specialty.

Manufacturers' Agent and for the BALL AUTOMATIC CUT-OFF ENGINE, which embodies a "new" system of speed regulation, in which the governor maintains a perfectly uniform speed under the greatest varying load, or when so adjusted, speed will increase with load, automatically doubling it, or as required.

Send for Descriptive Circular to 144 W Baltimore street; also with MURRELL & KEIZER, 25 N. Holliday St., Baltimore, Md.

Vulcan Works BALTIMORE, MD.

The undersigned is prepared to contract for the manufacture and erection of BOILERS AND ENGINES for Steamers, Manufactories, Mines, Water Works, Blowing Engines for Furnaces, &c., &c. He will also furnish designs and contract for the building and erection of Iron Bridges, Build Girders, Beams, &c., for Railways or Buildings. Castings of all descriptions. Information and estimates furnished upon application as above.

H. R. HAZLEHURST.



Covert PATENT Lariat Tether

—AND—

PICKET PIN.



This Tether is made of 1/2-inch Jute or Manila Rope, 30 feet in length, with the Covert Swivel Snap at each end, clamped on with the steel ring clamps. The Pin is 15 inches in length, manufactured of wrought iron with a movable attachment or swivel at the head, which, in connection with the swivel snaps, renders impossible any twisting, kinking or tangling of the rope. It is a most desirable article for the farm, prairie, or the plains. We also offer to the trade our extensive line of Covert Harness Snaps, Chain and Rope Goods for sale by all leading Jobbers at Manufacturers' prices.

SEND FOR ILLUSTRATED CATALOGUE and PRICE-LIST.

COVERT MANUFACTURING CO., WEST TROY, N. Y.

THE GARDNER GOVERNOR. Over 30,000 in Use

Adapted to every style of stationary and portable steam engines.

Warranted to give satisfaction, or no sale.

For Circars and Prices address

The Gardner Governor Co.,
Quincy, Ill.



NOTICE to CONTRACTORS

The City Council of Fredericksburg, Va., proposes to introduce water into the town. Bids for the contract for constructing the works will be received by the Committee on Water up to 12 o'clock M.,

MAY 22d, 1884,

when they will be opened and the contract awarded. The party to whom it is awarded will be required to give bond with approved security for a faithful compliance with the contract. The Committee reserves the right to reject any and all bids. Specifications can be had of the Committee. The work must be commenced by the first day of June, and completed by or before the first day of October, 1884.

S. J. QUINN,
J. S. KNOX,
C. E. HUNTER,
T. McCACKEN,
WM. E. BRADLEY,
Committee on Water.

FREDERICKSBURG, VA., April 29, 1884.

ESTABLISHED 1865.

Steam Boilers

JOHN T. COLEMAN & SONS,

Steam Boiler Works,
Cor. Holliday and Pleasant Sts., Baltimore.

Manufacturers of all kinds of Steam and Bath Boilers, Smoke Stacks, Water Tanks, Lard Kettles, &c. Particular attention given to repairs.

E. J. CODD & CO.
Foundry, Machine and Boiler Works,
255 to 261 S. Caroline St., BALTIMORE.

BUILDERS OF

Stationary and Marine Boilers, Stills, Tanks, Agitators, Kettles, &c., Stationary and Marine Engines, Fertilizing Mills, Steam Dredges, &c.

Prompt attention given to Steamship, Mill and other Repairs. Iron and Brass Castings made to order.

THE SOMBART Gas Engine

PATENT

Started Instantly. No Fire to Build. No Boiler to Watch. No Engineer Required. No Coal nor Ashes. No Water Needed.

DANGER OF EXPLOSION! Four Sizes, 1/2, 1, 1 1/2 and 1-horse-power. (Actual.)

When stopped all expense ceases. The most convenient and cheapest Motor for small power ever made. Just the thing for Printing Offices, Landries, Jewelers, Saddlers, Coffee Mills, Small Shops, etc.

Sombart Gas Engine Co., HARTFORD, CONN.

For sale by Jackson & Tyler, 16 S. Howard St., Baltimore.

McSHANE * BELL * FOUNDRY

Manufacture those celebrated Bells and Chimes for Churches, Tower Clocks, &c., &c. Prices and catalogues sent free.

H. McSHANE & CO.
Baltimore, Md.

REUBEN HAINES,
Analytical Chemist,

738 SANSON ST., PHILADELPHIA.

Water Analysis and Assays of Ores and Minerals.

MOORE'S
Business
AND UNIVERSITY SCHOOL
ATLANTA, GEORGIA
ENGLISH TRAINING
STUDENTS DAILY ON CHANGE
SEND FOR CIRCULARS.

HOTEL WANTED.

Fincastle, a mountain town of southwest Virginia, only 5 miles from railroad, noted for its splendid climate and great healthfulness, with scenery unsurpassed in the State, offers a splendid opening for a hotel, either large or small. Accommodations entirely inadequate to the demand.

A hundred yards or so from the town is a mineral spring, the waters of which possess great medicinal virtues, especially for liver and stomach troubles, —dyspepsia, &c. In fact this water has never been known to fail, even in the most aggravated cases of dyspepsia.

An unusually favorable opportunity is offered or building a hotel. Address

DR. CYRUS DOGGET.

Fincastle, Va.

THE

Manhattan.

The June Number will appear in a New Cover.

CONTENTS OF MAY NUMBER:

Illustration of Trajan. Frontispiece.—Drawn by Arthur Lumley. Engraved by Willie Miller.

The Gunnison Country. First paper.—Ernest Ingersoll.

Trajan. A novel. Chapters I., II. and III. Illustrated.

Whose SONNETS? —Appleton Morgan **Rimini and the Malcontent.** Alfred Ashton. Illustrations. Drawn by Gabriel Carelli. The SEVEN CONVERSATIONS OF DEAR JONES AND BABY VAN RENSELLAER. Brander Matthews and H. C. Tanner.

CHILDREN IN FICTION. Mrs. Schuyler Van Rensselaer.

LEO XIII. —Willard H. Morse **Ulric Zwingli.** Charles H. Hall. Illustrations. Drawn by C. Morgan McIlhenny.

The LATEST NEWS ABOUT KRATS. Joel Benton. **TINKLING CYMBALS.** A story. Chapters XII. and XIII. Edgar Fawcett.

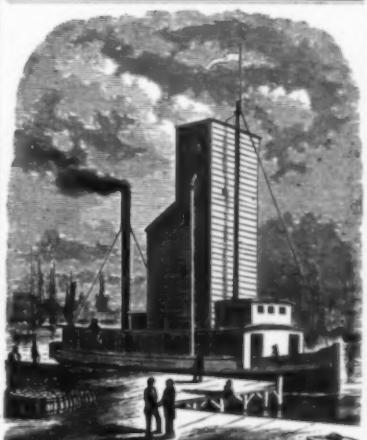
The poets of the number are Francis L. Mace, North Ferry, Waldo Messoar, W. H. Carpenter, H. N. French, J. W. Chadwick, A. S. Coombs.

Recent Literature, Town Talk, Salmagundi.

WHITTLINGS. —Zeke Fairchild \$3.00 a year, postage paid. 25 cts. a number.

THE MANHATTAN MAGAZINE CO.

Temple Court, New York City.



F. H. FOLSOM,
Millwright and Mechanical Engineer,
18 East Falls Ave., BALTIMORE, MD.

All work executed and Drawings furnished at shortest notice for Floating and Stationary Elevators, Flour Mills, Malt Houses, Breweries, Saw Mills, Fertilizing Factories, Samac Mills, Paper Mills, and all other kinds of Machinery.—Orders by mail promptly attended to at lowest prices.



Agent for Seldner's Improved Belt Fastener.

Send for Circular and Sample.—

HOISTING ENGINES

Of any Power, Double and Single, with

Improved Patent Friction Drums.

Especially adapted for Bridge Building, Dock Building, Pile Driving, Coal Hoisting, Quarries, Mines, etc.

STAMP MILLS

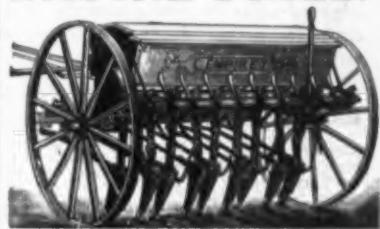
OF ANY SIZE FOR MINES.

J. S. MUNDY

22 & 24 Prospect St.

Newark, N. J.

EMPIRE DRILL.



With Force-Feed Fertilizer Attachment.

Any brand of commercial manure sown with accuracy. **NO GUESS WORK.** Over 8,000 in use, giving unbound satisfaction.

Sheldon Self-Dump RAKES and **Excelsior Horse-Poke.**

All three Implements first-class in every respect. Address inquiries to

EMPIRE DRILL CO., 10 Swan St., Baltimore.

ENGINES, BOILERS, &c.

For Sale Low.

1	Porter Horizontal Engine, 50-H. P.	New
1	" " Portable	25-H. P.
1	" " "	4-H. P.
1	Birdsall Traction Engine, 10-H. P.	
1	" " Portable	10-H. P.
1	" " "	8-H. P.
1	Semi-Portable Engine, 8-H. P.	New
1	Wood, Tabor & Morse, 8-H. P.	Second hand.
1	Curley Saw Mill, No. 2.	New.
1	Noveltie Saw Mill.	New.
	Also Engines, both Portable and Stationary, any size, or any size or description of Boilers. The Gardner 5-Cylinder Engines. Snyder's Little Giant Engines and Boilers. Low Prices guaranteed. Send for Estimates, stating size wanted and purpose to be used for, to	

WM. R. EMERSON,

6 and 8 North Liberty St.,

BALTIMORE.

Established 1867.

E. HARRINGTON, SON & CO.

WORKS AND OFFICE,
Cor. N. 15th St. and Penna. Ave., Philadelphia, Pa.

Manufacturers of Patent Extension

LATHES,



Iron Planers, Boring Mills, Drills, and a variety of other MACHINISTS' TOOLS.

Patent Double Chain Screw Pulley Blocks, unrivaled for durability, safety and power.

Patent Double Chain Quick-Lift Hoists, with Brake for quick and easy lowering.

REFINED BY
J. Q. MAYNARD, 97 Liberty St., New York City.
C. E. KIMBALL, 191 High Street, Boston, Mass.
W. H. RICKEY, 116 Main St., Cincinnati, Ohio.

Circulars furnished.

WIRE RAILING

and Ornamental Wire Works.

DUFUR & CO., 36 N. Howard St., Baltimore.

Wire Railing for Cemeteries, Lawns, Gardens, Offices and Balconies; Window Guards, Tree Guards, Wire Cloth, Sieves, Fenders, Cages, Sand and Coal Screens, Iron Bedsteads, Chairs, Settees, &c.

Hamilton McDowell,

DESIGNER AND ENGRAVER

On Wood and Metal,
74 West Fayette Street,
BALTIMORE, MD.

Mechanics' and Catalogue Work a specialty

W. H. HASKELL, President.

E. S. MASON, Treasurer.

D. A. HUNT, Agent.

W M. H. MASKELL CO.

MANUFACTURERS OF

GIMLET POINT

COACH SCREWS,

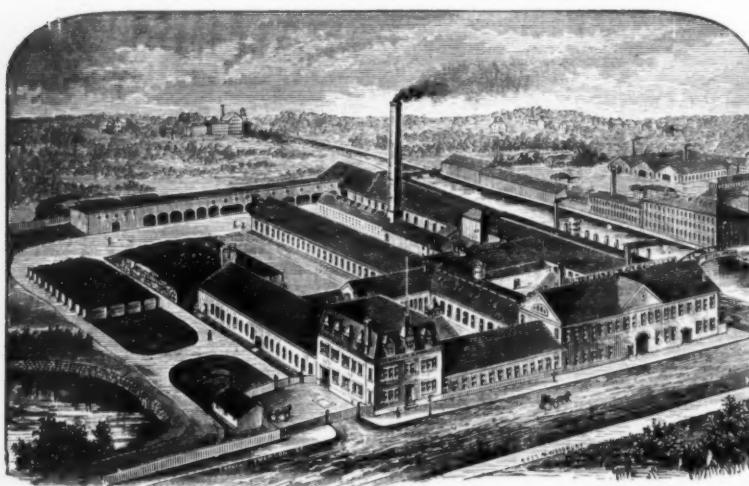
Bolts, Cold-Punched Nuts & Washers,

Suitable for Machinery of all kinds.

Office and Works: 277 Main St., PAWTUCKET, R. I., U. S. A.

HENRY B. NEWHALL CO., Agts.,

105 Chambers St., NEW YORK. 47 Pearl St., BOSTON.

**NICHOLSON FILE CO.**

Works—PROVIDENCE, R. I.—1882.



THOMPSON IMPROVED INDICATOR.

THOMPSON Improved Indicator.

ONE THOUSAND NOW IN USE.

Adopted and Used by the Following Engineering Experts:

F. W. Bacon, M. E.,
Geo. A. Barnard, M. E.,
C. H. Brown,
C. W. Copeland, C. E.,
A. M. Davy, M. E.,
Charles E. Emery, C. E.,

John W. Hill, M. E.,
William A. Harris,
J. C. Headley, C. E.,
T. W. Hugo, M. E.,
Washington Jones, M. E.,
J. F. Klein, M. E.,

E. D. Leavitt, Jr., C. E.,
Henry Morton, C. E.,
Thomas Pray, Jr., C. M. E.,
Frank H. Pond, M. E.,
Prof. R. H. Thurston,
H. W. Bulkley, M. E.

MANUFACTURED SOLELY
BY THE**AMERICAN STEAM GAUGE CO.**

35 Chardon Street, BOSTON, MASS.

THE BROWN SLOW-RAISING QUICK-STRIKING HAMMER.A QUICK DOWN-STROKE.
Unequalled Force of Blow.

No Manufacturer can afford to buy a Power Hammer without investigating the merit of great Improvements. See "Send for Description."

Knowlton Manf'g Co.,
EAST ROCKFORD, ILL.

JOSEPH B. MATTHEWS, 41 Centre Market Space, BALTIMORE, MD.

MANUFACTURER OF THE

MATTHEWS AUTOMATIC HIGH-SPEED ENGINE.

For Electric Lights and other purposes requiring steady, reliable power. The best and cheapest in the market. \$1. H. P. for \$500. SEND FOR CIRCULAR.

W. J. CHAPMAN,

Direct Shipper of COAL AND Connellsburg Coke. Special attention given to orders from founders and machinists.

Office, York and William Sts.

MOOPES & TOWNSEND,

MANUFACTURERS,

PHILADELPHIA, PA.

**KEYSTONE BOILER RIVETS.**

Cold-Punched Square and Hexagon Nuts.

Finished and Case-Harde ed Steel Hexagon Nuts.

BRIDGE RODS AND RIVETS.

BUILDERS' IRON WORK.

TANK AND COOPERS' RIVETS.

REUTER & MALLORY,

No. 22 LIGHT ST., BALTIMORE, MD.

SOLE SOUTHERN AGENTS FOR

Reading Bolt and Nut Works.Manufacturers of
Bolts, Nuts, Washers,

LAG SCREWS, &c.

Dealers in
Gum & Leather Belting,Wrought Iron Pipe,
FOR
STEAM, WATER AND
GAS, and
Railroad, Machinists' and Mfrs.
Supplies Generally.

SEND FOR PRICE LISTS.

IMPROVED HOISTING ENGINES,

MANUFACTURED BY THE

LIDGERWOOD MFC. CO.,

Offices and Salesrooms: 96 Liberty St., New York.

MORTON, REED & CO., Agents,

59 and 61 German St., Baltimore.

Specially adapted
for Railroad
and Contractors'
uses. Pile-driving,
Bridge and Dock
Building, Excavating,
etc. Single or
double cylinders,
with single or
double improved
friction drums,
with or without
rollers.THE ECLIPSE
HAND PIPE-
CUTTING
MACHINE.Just the Tool for Mill,
Factory, Machine-
Shop, or Pipe-
Fitters.

No. 1 Cuts $\frac{1}{4}$ to 2 in.
No. 2 Cuts $2\frac{1}{2}$ to 4 in.
No. 3 Cuts $2\frac{1}{2}$ to 6 in.

FOR PLUMBERS, MILLS,
FACTORIES, &c.THE ROUSE PIPE-WRENCH
Is the Simplest and Strongest Pipe-Wrench
in the Market. Drop Forged from
Best Tool Steel.For full particulars of both these Tools, address
and mention this Paper.**PANCOAST & MAULE,**243 & 245 South Third Street,
PHILADELPHIA.Charles Webs' er Pres. S. M. Burnham, Sec'y.
J. S. Lane, Supt. W. T. Allen, Treas.**WEBSTER, CAMP & LANE MACHINE CO.**

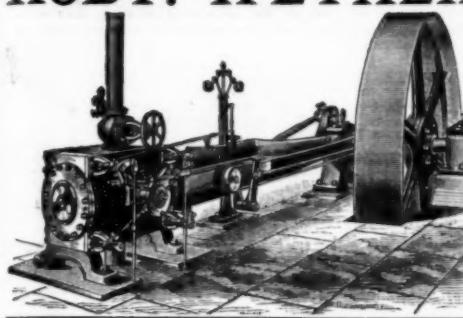
No. 140 Main St., Akron, O.

BAND FRICTION HOIST
For Mines and Blast Furnaces.The SAFEST, SIMPLEST, STRONGEST and
BEST in the Market. Engines, Boilers, Pumps,
Skips, and everything pertaining to a first-class
plant of Hoisting Machinery. Correspondence
solicited.

ROBT. WETHERILL & CO.

Corliss Engine

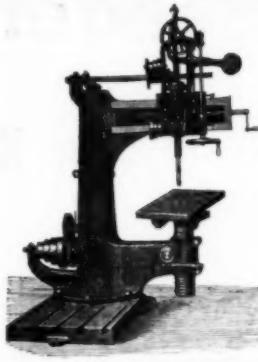
BUILDERS,

Condensing, Non-Condensing
and Compound.
Highest Efficiency and Greatest
Economy, Durability and
Close Regulation.Boiler Iron Work, Hydraulic
Riveting, Shafting, Pulleys,
Hangers and Gearing.ROBT. WETHERILL & CO.
CHESTER, PA.WM. B. BEMENT & SON,
PHILADELPHIA,Manufacturers of
METAL WORKING MACHINE

Tools

of all descriptions, and of a great number of sizes,
including

STEAM HAMMERS,

Steam and Hydraulic Riveters, Cranes, Punches and
Shears, Bending Rolls, Plate Planers, &c.THE
Cameron Steam Pump

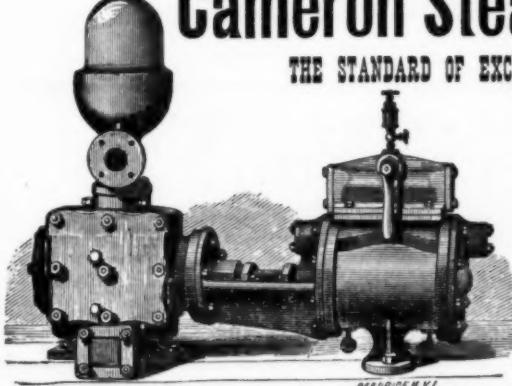
THE STANDARD OF EXCELLENCE.

UPWARD of 30,000 in Use.

SEND FOR ILLUSTRATED
CATALOGUE.The A. S. CAMERON
STEAM PUMP WORKS,

433 East 23d St.

NEW YORK.



Prentiss' Patent Vises.

Adjustable Jaw.

Stationary or Pat. Swivel Bottoms.

CANNOT GET OUT OF ORDER.

Cheapest and Best Vises for Railroad Shops, Machinists, Manufacturers, Mechanics, &c.

"Peerless" (Swivel Jaw) Pipe Grip.
Every Part Interchangeable.
CAN BE USED ON ANY VISE.

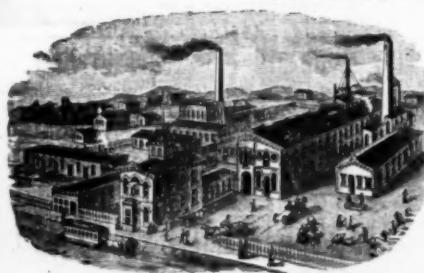
PRENTISS VISE CO., 23 Dey Street, NEW YORK, Sole Proprietors.

Ludlow Valve Manfg. Co.

Works:

938 to 954 River Street, and 67 to 83 Vail Avenue,

TROY, N. Y.



VALVES

Double and Single Gate, $\frac{1}{4}$ inch to
48 inch, Outside and Inside
Screws, Indicators, etc., for
Gas, Water, Steam, Oil.
Send for Circular.

Also, Fire Hydrants, Yard and Wash Hydrants, Check and Foot Valves.

WM. SELLERS & CO.

PHILADELPHIA.



IRON and STEEL-WORKING MACHINE TOOLS

For Railways, Machine Shops and Rolling Mills. Also,

Shafting, Pulleys, Hangers, Couplings, &c.

Were the first parties to design and introduce the BALL and SOCKET HANGERS, ADJUSTABLE COUPLINGS, and the system of selling Shafts, Pulleys and Couplings by the piece. Will be pleased at any time to give estimates for work in place, in mills, or at our works. PRICE-LISTS and other information given when requested.

BACON

Winding Engines,
Furnace Hoists,
Mine Hoists.

(With or Without Boilers.)

"Mining Plants," Concentrating Works, and Dredging Machinery Furnished Complete.

COPELAND & BACON,
85 Liberty Street. New York.References: Croton Magnetic Iron Mines, Brewster's, N. Y.
Crown Point Iron Co., Crown Point, N. Y.
Baldwin Iron Co., 32 Broadway, N. Y.
Sea Island Chemical Co., Beaufort, S. C.

THE NATIONAL CHUCK

WARRANTED

THE BEST CHUCK IN THE MARKET.

MANUFACTURED BY

The National Mfg. Co.

MANUFACTURERS OF
Combination, Universal
and Independent

LATHE CHUCKS,

THE MIDVALE STEEL CO.
TIRES AND AXLES

OF EVERY DESCRIPTION.

TOOL
AND
MACHINERY STEEL.

CRUCIBLE AND OPEN HEARTH STEEL.

WORKS AND OFFICE:

Westtown, Philadelphia, Pa.

WAREHOUSE:

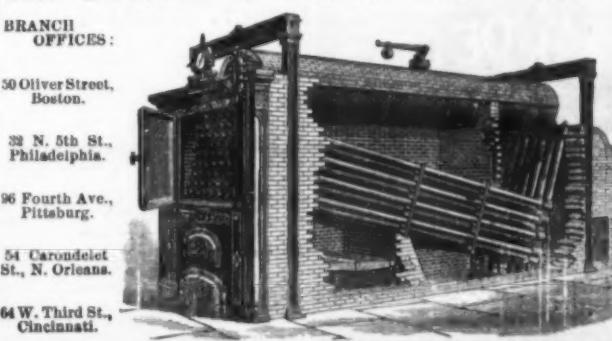
12 North Fifth St., Philadelphia, Pa.

The Babcock & Wilcox Water Tube Boilers.

BRANCH OFFICES:

30 Oliver Street,
Boston.32 N. 5th St.,
Philadelphia.96 Fourth Ave.,
Pittsburg.54 Carondelet
St., N. Orleans.64 W. Third St.,
Cincinnati.

BRANCH OFFICES:

707 Market St.,
St. Louis.64 S. Canal St.,
Chicago.561 Mission St.,
San Francisco.San Ignacio,
No. 50, Havana,
Cuba.157 Hope Street,
Glasgow,
Scotland.

Manufactured by the BABCOCK & WILCOX CO., 30 Cortlandt Street, NEW YORK.

SAML. G. B. COOK & CO., HARDWARE

MANUFACTURERS' AGENTS
63, 65, 67 and 69 German St., BALTIMORE, MD.

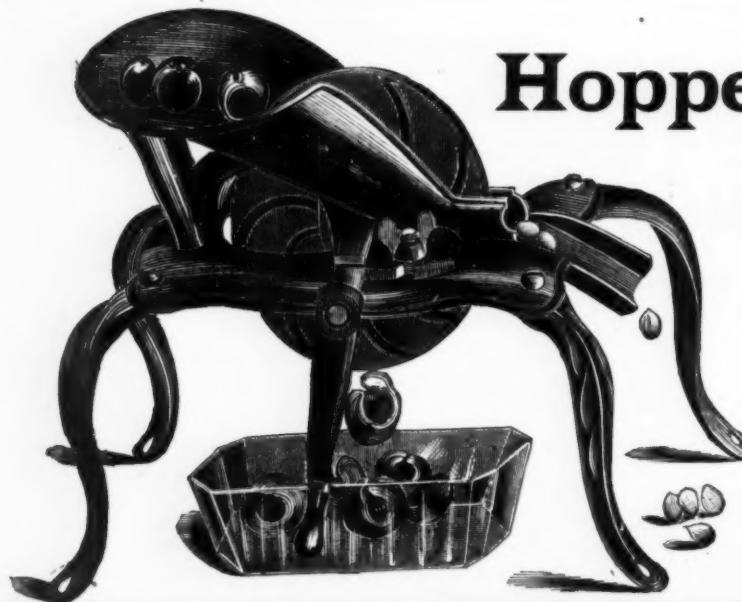
T. V. Allis Mfg. Co.—Buckthorn Wire.
American Screw Co.—Screws, Rivets, Bolts, etc.
Branford Lock Works.
Boss Molasses Gates.
Carr & Crawley.—Sheaf and Carriage Hardware.
Lancaster Bolt Co.—Eagle Carriage Bolts.
Lawson & Brenizer.—Hay and Manure Forks.
Meriden Britannia Co.—Rogers Bros.' Al Plated Goods.
Northwestern Horse Nail Co.
Nicholson File Co.
Naugatuck Cutlery Co.
Globe Horse Nail Co.

Clark Hardware Co.—Spring Butts, Screen Frames, etc.
Cowles Hardware Co.—Geers, Butts, Screw Drivers, etc.
H. Chapin's Sons.—Rules, Levels, Gauges, etc.
Clark Bros. & Co.—Bolts.
Essex Horse Nails.
A. Field & Sons.—Tacks, Finishing Nails, etc.
Hubbard, Bakewell & Co.—Lippincott Axes, Saws, Shovels and Hoes.
Holroyd & Co.—Stocks and Dice.
Henry W. Kipp.—Hammers.
Klein, Logan & Co.—Picks, Mattocks, Sledges, etc.
Kimball's Patent Shovels and Spades.
Lockwood Steel Hoes.

Peck Bros. & Co.—Brass Cocks.
Payson Mfg. Co.—Building Hardware.
Patton Mfg. Co.—Enamelled and Tin'd Hollow Ware.
Roy & Co.—Strap and T Hinges and Wrought Butts.
Saranac Horse Nail Co.
Scott Mfg. Co.—Peach and Apple Parers, etc.
George M. Scott.—Blacksmith Bellows.
Wilson Mfg. Co.—Coffee Mills, Vises and Ship Hardware.
Walker's Horse and Mule Shoes.
International and Pimlico Brand of Horse Nails, Foreign and
Domestic Hardware, Cutlery, Chains, Pistols, etc.

• IMPROVED • 1884. •

Hopper Cherry Seeder.



SCOTT MANUFACTURING CO., Baltimore, Md.

ALSO MANUFACTURERS OF

SCOTT'S ROTARY KNIFE PEACH PARERS.

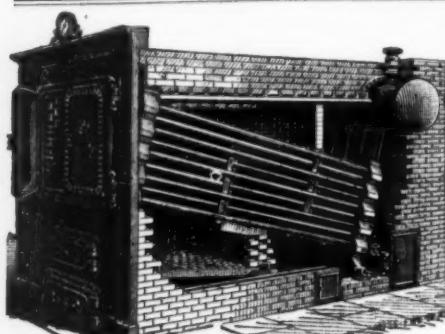
"Improved VICTOR" Apple Parers, Corers and Slicers.
"ORIOLE" Apple Parers, Corers and Slicers.

"GOLD MEDAL" Apple Parers.
WALKER'S Pine Apple Slicers.
PHILLIPS' Fruit and Vegetable Evaporators.
BIXBY'S Best Water Filter and Deodorizer.

JACKSON & TYLER BALTIMORE.

MACHINERY, TOOLS AND SUPPLIES.

Shafting, Hangers and Pulleys, Belting, &c., Sombart Gas Engines, Baxter Steam Engines. Send for New Illustrated Catalogue



SAFETY WATER-TUBE

Boiler Works

Zell & Burton,
Manufacturers under the Zell Patents.

We make a specialty of contracting for the erection of Engine and Boiler Plants.

Also, MANUFACTURERS' AGENTS

FOR THE—

BUCKEYE AUTOMATIC ENGINES.

ZELL Retort FURNACES for Steam Boilers.

CONDENSERS, HEATERS, PUMPS, &c.

Office and Works, No. 42 N. HOLLIDAY STREET, BALTIMORE, MD.



GREAT SOUTHERN DESPATCH
FAST FREIGHT LINE BETWEEN
BALTIMORE AND THE SOUTH AND SOUTHWEST,
Via Western Maryland Railroad.

For Rates and other information apply to or address:
B. H. Griswold, A. Pope, Gen. B. Agt., D. K. Houck, Sol. Agt., J. H. Geigan & Co., Agts.,
G. F. A. W. M. & R. R. Balt., Roanoke Va., 133 W. Baltimore St., 133 W. Baltimore St.,
D. H. Knipple, Agt., Hillen St.

S. W. RITTER, Millwright,

—BUILDER OF—
Flour and Saw Mills, Drug and Chemical Works, Portable Mills, Smut Machines, Mill Stones, Bolting Cloths, Brushes, Guano Fertilizer Mills, and General Mill Supplies,

261 S. Caroline Street, BALTIMORE, MD.

Peerless Pressure Recording Gages

make a perfect record of all Steam, Water or Gaseous Pressures. **Best and Cheapest Gage in the world.** SEND FOR CIRCULAR. FOR SALE BY THE TRADE.

S. P. JONES, 28 SCHOOL STREET, BOSTON, MASS.

White Mountain Freezer Co.

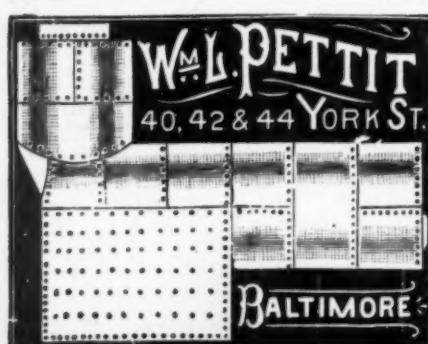
MANUFACTURERS OF

SANDS' PATENT TRIPLE MOTION White Mountain Ice-Cream Freezer.

The only Freezer ever made having three distinct motions, thereby producing finer, smoother Cream than any other Freezer on the market. Acknowledged by every one to be the best in the world. Over 300,000 in use to-day. Outside iron galvanized, but all inside can coated with Pure Block Tin. Tubs water-proof, machinery easily adjusted and operated. We also carry large stock of Packing Tube, Packing Cans, Ice Crushers, &c. Send for Price List and Trade Discounts.

Address—

White Mountain Freezer Co.
102 E. HOLLIS ST., NASHUA, N. H.



NOVELTY BOILER WORKS.

MANUFACTURER OF

HIGH AND LOW PRESSURE

Steam Boilers, Tank and Sheet Iron Work.

Estimates furnished for New Work and Repairs.

I make a specialty of Scotch Boilers the most economical in fuel, requiring very little repairs.



HARDWARE.**Baltimore WHOLESALE Prices.****ANVILS.**

Eagle and Vulcan. \$10 10c, dis 20%
Wright's. 10 10c
Armitage's Mouse Hole. 10 10c
Trenton. 10 10c
Wilkinson's. 10 10c

AUGERS AND BITS.

Conn. Valley Mfg. Co. dis 60¢
Douglass Mfg. Co. from list of
Ives. Jan. 7, 1880

Cook's Douglass Mfg. Co. dis 40¢ 10¢
Griswold. 50¢ 10¢
Patent Solid Head. dis 25¢
Russell Jennings' Auger, Dowel, Machine
Dowel and Hand Rail Bits. dis 10¢ 10¢ 10¢
Ives' "Jennings'" Bits. dis 40¢ 10¢ 10¢
Expansive Bits, Clark's, small. \$18; large. 36¢ 25¢
Expansive Bits, Ives'. \$30/30, dis 33¢
Expansive Bits, Blake's. \$30, dis 40¢
Hollow Augers, Ives'. dis 25¢
Hollow Augers, Douglass'. dis 25¢
Hol. Aug., Bonney's Adjust. \$10 gross \$48, dis 25¢ 10¢
Hol. Aug., Stearns' Adjust. \$10 gross \$48, dis 20¢ 10¢
Hol. Aug., Ives' Expansive, each \$4.50, dis 30¢ 10¢
Hol. Aug., Universal Expansive, each \$4.50, dis 20¢
Wood's. dis 25¢
Gimlet Bits. \$7.50 per gross, dis 50¢
Gimlet Bits, Diamond. \$2.50 per gross, dis 40¢
Double Cut Gimlet Bits, Shephardson's. dis 40¢
Double Cut Gimlet Bits, Douglass'. dis 33¢
Double Cut Gimlet Bits, Ives'. dis 50¢
Morse's Bit Stock Drill. dis 25¢
L'Hommedien's Ship Augers. dis 15¢

AWL HAFTS.

Sewing Brass Ferrule. \$2.50 per gross, dis 40¢ 10¢
Patent Sewing, Short. \$10 per gross, dis 40¢ 10¢
Patent Sewing, Long. \$1.30 per gross, net
Patent Peg, Plain Top. \$10 per gross, dis 40¢ 10¢
Patent Peg, Leather Top. \$12 per gross, dis 40¢ 10¢

AWLS, BRAD SETS, &c.

Awls, Sewing, Common. 75¢ to \$1
Awls, Shouldered Peg. 75¢ to \$1
Awls, Patent Peg. 50¢ to \$1.50
Awls, Shouldered Brad. \$2.70 to \$10 10¢
Brad Sets, Aiken's. \$10 per gross, dis 25¢ 10¢
Brad Sets, No. 42, \$10.50; No. 43, \$12.50. dis 70¢
Brad Sets, Stanley's Exc. No. 1, \$9.60; No. 2, \$10.50; No. 3, \$11.50; No. 4, \$12.50; No. 5, \$13.50; No. 6, \$14.50; No. 7, \$15.50; No. 8, \$17.50; No. 9, \$19.50; No. 10, \$21.50; No. 11, \$23.50; No. 12, \$25.50; No. 13, \$27.50; No. 14, \$29.50; No. 15, \$31.50; No. 16, \$33.50; No. 17, \$35.50; No. 18, \$37.50; No. 19, \$39.50; No. 20, \$41.50; No. 21, \$43.50; No. 22, \$45.50; No. 23, \$47.50; No. 24, \$49.50; No. 25, \$51.50; No. 26, \$53.50; No. 27, \$55.50; No. 28, \$57.50; No. 29, \$59.50; No. 30, \$61.50; No. 31, \$63.50; No. 32, \$65.50; No. 33, \$67.50; No. 34, \$69.50; No. 35, \$71.50; No. 36, \$73.50; No. 37, \$75.50; No. 38, \$77.50; No. 39, \$79.50; No. 40, \$81.50; No. 41, \$83.50; No. 42, \$85.50; No. 43, \$87.50; No. 44, \$89.50; No. 45, \$91.50; No. 46, \$93.50; No. 47, \$95.50; No. 48, \$97.50; No. 49, \$99.50; No. 50, \$101.50; No. 51, \$103.50; No. 52, \$105.50; No. 53, \$107.50; No. 54, \$109.50; No. 55, \$111.50; No. 56, \$113.50; No. 57, \$115.50; No. 58, \$117.50; No. 59, \$119.50; No. 60, \$121.50; No. 61, \$123.50; No. 62, \$125.50; No. 63, \$127.50; No. 64, \$129.50; No. 65, \$131.50; No. 66, \$133.50; No. 67, \$135.50; No. 68, \$137.50; No. 69, \$139.50; No. 70, \$141.50; No. 71, \$143.50; No. 72, \$145.50; No. 73, \$147.50; No. 74, \$149.50; No. 75, \$151.50; No. 76, \$153.50; No. 77, \$155.50; No. 78, \$157.50; No. 79, \$159.50; No. 80, \$161.50; No. 81, \$163.50; No. 82, \$165.50; No. 83, \$167.50; No. 84, \$169.50; No. 85, \$171.50; No. 86, \$173.50; No. 87, \$175.50; No. 88, \$177.50; No. 89, \$179.50; No. 90, \$181.50; No. 91, \$183.50; No. 92, \$185.50; No. 93, \$187.50; No. 94, \$189.50; No. 95, \$191.50; No. 96, \$193.50; No. 97, \$195.50; No. 98, \$197.50; No. 99, \$199.50; No. 100, \$201.50; No. 101, \$203.50; No. 102, \$205.50; No. 103, \$207.50; No. 104, \$209.50; No. 105, \$211.50; No. 106, \$213.50; No. 107, \$215.50; No. 108, \$217.50; No. 109, \$219.50; No. 110, \$221.50; No. 111, \$223.50; No. 112, \$225.50; No. 113, \$227.50; No. 114, \$229.50; No. 115, \$231.50; No. 116, \$233.50; No. 117, \$235.50; No. 118, \$237.50; No. 119, \$239.50; No. 120, \$241.50; No. 121, \$243.50; No. 122, \$245.50; No. 123, \$247.50; No. 124, \$249.50; No. 125, \$251.50; No. 126, \$253.50; No. 127, \$255.50; No. 128, \$257.50; No. 129, \$259.50; No. 130, \$261.50; No. 131, \$263.50; No. 132, \$265.50; No. 133, \$267.50; No. 134, \$269.50; No. 135, \$271.50; No. 136, \$273.50; No. 137, \$275.50; No. 138, \$277.50; No. 139, \$279.50; No. 140, \$281.50; No. 141, \$283.50; No. 142, \$285.50; No. 143, \$287.50; No. 144, \$289.50; No. 145, \$291.50; No. 146, \$293.50; No. 147, \$295.50; No. 148, \$297.50; No. 149, \$299.50; No. 150, \$301.50; No. 151, \$303.50; No. 152, \$305.50; No. 153, \$307.50; No. 154, \$309.50; No. 155, \$311.50; No. 156, \$313.50; No. 157, \$315.50; No. 158, \$317.50; No. 159, \$319.50; No. 160, \$321.50; No. 161, \$323.50; No. 162, \$325.50; No. 163, \$327.50; No. 164, \$329.50; No. 165, \$331.50; No. 166, \$333.50; No. 167, \$335.50; No. 168, \$337.50; No. 169, \$339.50; No. 170, \$341.50; No. 171, \$343.50; No. 172, \$345.50; No. 173, \$347.50; No. 174, \$349.50; No. 175, \$351.50; No. 176, \$353.50; No. 177, \$355.50; No. 178, \$357.50; No. 179, \$359.50; No. 180, \$361.50; No. 181, \$363.50; No. 182, \$365.50; No. 183, \$367.50; No. 184, \$369.50; No. 185, \$371.50; No. 186, \$373.50; No. 187, \$375.50; No. 188, \$377.50; No. 189, \$379.50; No. 190, \$381.50; No. 191, \$383.50; No. 192, \$385.50; No. 193, \$387.50; No. 194, \$389.50; No. 195, \$391.50; No. 196, \$393.50; No. 197, \$395.50; No. 198, \$397.50; No. 199, \$399.50; No. 200, \$401.50; No. 201, \$403.50; No. 202, \$405.50; No. 203, \$407.50; No. 204, \$409.50; No. 205, \$411.50; No. 206, \$413.50; No. 207, \$415.50; No. 208, \$417.50; No. 209, \$419.50; No. 210, \$421.50; No. 211, \$423.50; No. 212, \$425.50; No. 213, \$427.50; No. 214, \$429.50; No. 215, \$431.50; No. 216, \$433.50; No. 217, \$435.50; No. 218, \$437.50; No. 219, \$439.50; No. 220, \$441.50; No. 221, \$443.50; No. 222, \$445.50; No. 223, \$447.50; No. 224, \$449.50; No. 225, \$451.50; No. 226, \$453.50; No. 227, \$455.50; No. 228, \$457.50; No. 229, \$459.50; No. 230, \$461.50; No. 231, \$463.50; No. 232, \$465.50; No. 233, \$467.50; No. 234, \$469.50; No. 235, \$471.50; No. 236, \$473.50; No. 237, \$475.50; No. 238, \$477.50; No. 239, \$479.50; No. 240, \$481.50; No. 241, \$483.50; No. 242, \$485.50; No. 243, \$487.50; No. 244, \$489.50; No. 245, \$491.50; No. 246, \$493.50; No. 247, \$495.50; No. 248, \$497.50; No. 249, \$499.50; No. 250, \$501.50; No. 251, \$503.50; No. 252, \$505.50; No. 253, \$507.50; No. 254, \$509.50; No. 255, \$511.50; No. 256, \$513.50; No. 257, \$515.50; No. 258, \$517.50; No. 259, \$519.50; No. 260, \$521.50; No. 261, \$523.50; No. 262, \$525.50; No. 263, \$527.50; No. 264, \$529.50; No. 265, \$531.50; No. 266, \$533.50; No. 267, \$535.50; No. 268, \$537.50; No. 269, \$539.50; No. 270, \$541.50; No. 271, \$543.50; No. 272, \$545.50; No. 273, \$547.50; No. 274, \$549.50; No. 275, \$551.50; No. 276, \$553.50; No. 277, \$555.50; No. 278, \$557.50; No. 279, \$559.50; No. 280, \$561.50; No. 281, \$563.50; No. 282, \$565.50; No. 283, \$567.50; No. 284, \$569.50; No. 285, \$571.50; No. 286, \$573.50; No. 287, \$575.50; No. 288, \$577.50; No. 289, \$579.50; No. 290, \$581.50; No. 291, \$583.50; No. 292, \$585.50; No. 293, \$587.50; No. 294, \$589.50; No. 295, \$591.50; No. 296, \$593.50; No. 297, \$595.50; No. 298, \$597.50; No. 299, \$599.50; No. 300, \$601.50; No. 301, \$603.50; No. 302, \$605.50; No. 303, \$607.50; No. 304, \$609.50; No. 305, \$611.50; No. 306, \$613.50; No. 307, \$615.50; No. 308, \$617.50; No. 309, \$619.50; No. 310, \$621.50; No. 311, \$623.50; No. 312, \$625.50; No. 313, \$627.50; No. 314, \$629.50; No. 315, \$631.50; No. 316, \$633.50; No. 317, \$635.50; No. 318, \$637.50; No. 319, \$639.50; No. 320, \$641.50; No. 321, \$643.50; No. 322, \$645.50; No. 323, \$647.50; No. 324, \$649.50; No. 325, \$651.50; No. 326, \$653.50; No. 327, \$655.50; No. 328, \$657.50; No. 329, \$659.50; No. 330, \$661.50; No. 331, \$663.50; No. 332, \$665.50; No. 333, \$667.50; No. 334, \$669.50; No. 335, \$671.50; No. 336, \$673.50; No. 337, \$675.50; No. 338, \$677.50; No. 339, \$679.50; No. 340, \$681.50; No. 341, \$683.50; No. 342, \$685.50; No. 343, \$687.50; No. 344, \$689.50; No. 345, \$691.50; No. 346, \$693.50; No. 347, \$695.50; No. 348, \$697.50; No. 349, \$699.50; No. 350, \$701.50; No. 351, \$703.50; No. 352, \$705.50; No. 353, \$707.50; No. 354, \$709.50; No. 355, \$711.50; No. 356, \$713.50; No. 357, \$715.50; No. 358, \$717.50; No. 359, \$719.50; No. 360, \$721.50; No. 361, \$723.50; No. 362, \$725.50; No. 363, \$727.50; No. 364, \$729.50; No. 365, \$731.50; No. 366, \$733.50; No. 367, \$735.50; No. 368, \$737.50; No. 369, \$739.50; No. 370, \$741.50; No. 371, \$743.50; No. 372, \$745.50; No. 373, \$747.50; No. 374, \$749.50; No. 375, \$751.50; No. 376, \$753.50; No. 377, \$755.50; No. 378, \$757.50; No. 379, \$759.50; No. 380, \$761.50; No. 381, \$763.50; No. 382, \$765.50; No. 383, \$767.50; No. 384, \$769.50; No. 385, \$771.50; No. 386, \$773.50; No. 387, \$775.50; No. 388, \$777.50; No. 389, \$779.50; No. 390, \$781.50; No. 391, \$783.50; No. 392, \$785.50; No. 393, \$787.50; No. 394, \$789.50; No. 395, \$791.50; No. 396, \$793.50; No. 397, \$795.50; No. 398, \$797.50; No. 399, \$799.50; No. 400, \$801.50; No. 401, \$803.50; No. 402, \$805.50; No. 403, \$807.50; No. 404, \$809.50; No. 405, \$811.50; No. 406, \$813.50; No. 407, \$815.50; No. 408, \$817.50; No. 409, \$819.50; No. 410, \$821.50; No. 411, \$823.50; No. 412, \$825.50; No. 413, \$827.50; No. 414, \$829.50; No. 415, \$831.50; No. 416, \$833.50; No. 417, \$835.50; No. 418, \$837.50; No. 419, \$839.50; No. 420, \$841.50; No. 421, \$843.50; No. 422, \$845.50; No. 423, \$847.50; No. 424, \$849.50; No. 425, \$851.50; No. 426, \$853.50; No. 427, \$855.50; No. 428, \$857.50; No. 429, \$859.50; No. 430, \$861.50; No. 431, \$863.50; No. 432, \$865.50; No. 433, \$867.50; No. 434, \$869.50; No. 435, \$871.50; No. 436, \$873.50; No. 437, \$875.50; No. 438, \$877.50; No. 439, \$879.50; No. 440, \$881.50; No. 441, \$883.50; No. 442, \$885.50; No. 443, \$887.50; No. 444, \$889.50; No. 445, \$891.50; No. 446, \$893.50; No. 447, \$895.50; No. 448, \$897.50; No. 449, \$899.50; No. 450, \$901.50; No. 451, \$903.50; No. 452, \$905.50; No. 453, \$907.50; No. 454, \$909.50; No. 455, \$911.50; No. 456, \$913.50; No. 457, \$915.50; No. 458, \$917.50; No. 459, \$919.50; No. 460, \$921.50; No. 461, \$923.50; No. 462, \$925.50; No. 463, \$927.50; No. 464, \$929.50; No. 465, \$931.50; No. 466, \$933.50; No. 467, \$935.50; No. 468, \$937.50; No. 469, \$939.50; No. 470, \$941.50; No. 471, \$943.50; No. 472, \$945.50; No. 473, \$947.50; No. 474, \$949.50; No. 475, \$951.50; No. 476, \$953.50; No. 477, \$955.50; No. 478, \$957.50; No. 479, \$959.50; No. 480, \$961.50; No. 481, \$963.50; No. 482, \$965.50; No. 483, \$967.50; No. 484, \$969.50; No. 485, \$971.50; No. 486, \$973.50; No. 487, \$975.50; No. 488, \$977.50; No. 489, \$979.50; No. 490, \$981.50; No. 491, \$983.50; No. 492, \$985.50; No. 493, \$987.50; No. 494, \$989.50; No. 495, \$991.50; No. 496, \$993.50; No. 497, \$995.50; No. 498, \$997.50; No. 499, \$999.50; No. 500, \$1001.50; No. 501, \$1003.50; No. 502, \$1005.50; No. 503, \$1007.50; No. 504, \$1009.50; No. 505, \$1011.50; No. 506, \$1013.50; No. 507, \$1015.50; No. 508, \$1017.50; No. 509, \$1019.50; No. 510, \$1021.50; No. 511, \$1023.50; No. 512, \$1025.50; No. 513, \$1027.50; No. 514, \$1029.50; No. 515, \$1031.50; No. 516, \$1033.50; No. 517, \$1035.50; No. 518, \$1037.50; No. 519, \$1039.50; No. 520, \$1041.50; No. 521, \$1043.50; No. 522, \$1045.50; No. 523, \$1047.50; No. 524, \$1049.50; No. 525, \$1051.50; No. 526, \$1053.50; No. 527, \$1055.50; No. 528, \$1057.50; No. 529, \$1059.50; No. 530, \$1061.50; No. 531, \$1063.50; No. 532, \$1065.50; No. 533, \$1067.50; No. 534, \$1069.50; No. 535, \$1071.50; No. 536, \$1073.50; No. 537, \$1075.50; No. 538, \$1077.50; No. 539, \$1079.50; No. 540, \$1081.50; No. 541, \$1083.50; No. 542, \$1085.50; No. 543, \$1087.50; No. 544, \$1089.50; No. 545, \$1091.50; No. 546, \$1093.50; No. 547, \$1095.50; No. 548, \$1097.50; No. 549, \$1099.50; No. 550, \$1101.50; No. 551, \$1103.50; No. 552, \$1105.50; No. 553, \$1107.50; No. 554, \$1109.50; No. 555, \$1111.50; No. 556, \$1113.50; No. 557, \$1115.50; No. 558, \$1117.50; No. 559, \$1119.50; No. 560, \$1121.50; No. 561, \$1123.50; No. 562, \$1125.50; No. 563, \$1127.50; No. 564, \$1129.50; No. 565, \$1131.50; No. 566, \$1133.50; No. 567, \$1135.50; No. 5

BALTIMORE MANUFACTURERS' RECORD.

Woodruff's (P. S. & W.) Nos. 100 150 ∇ doz. \$15 18-ds 35 $\frac{1}{2}$	Chicago Scale Co. Special dia Fairbanks' dia 20 $\frac{1}{2}$ Forsyth Scale Co. dia 46 $\frac{1}{2}$ Howe' dia 20&10 $\frac{1}{2}$ Kleser's No. 55 \$40 ∇ doz. dia 40 $\frac{1}{2}$ Kleser's Gem \$25 ∇ doz. dia 40 $\frac{1}{2}$ Kleser's No. 82 \$40 ∇ doz. dia 40 $\frac{1}{2}$ Kleser's Monarch \$45 ∇ doz. dia 40 $\frac{1}{2}$ Beef Shaver, (Enterprise Manf. Co.) dia 25 $\frac{1}{2}$
MOLASSES GATES.	SCRAPERS.
Stebbins Patterns dia 70&10 $\frac{1}{2}$ Stebbins Genitae dia 75&10 $\frac{1}{2}$ Stebbins Tinned Ends dia 40&10 $\frac{1}{2}$ Chase's Hard Metal dia 50&10 $\frac{1}{2}$ Self-Measuring, (Enterprise) dia 20 $\frac{1}{2}$ Lincoln's Pattern dia 60&10 $\frac{1}{2}$ Weed's dia 60&10 $\frac{1}{2}$ Boss Nos. 1 2 3 4 ∇ 7 8 9 10. ∇ doz. Boss, Japanned Fini-h. dia 60&10&10 $\frac{1}{2}$ Boss, Bronze Finish. dia 50&10&10 $\frac{1}{2}$	Adjust. Box Scraper (S. R. & L. Co.) \$5.00 dia 20&10 $\frac{1}{2}$ Box 1 Handle ∇ doz. \$4. dia 10 $\frac{1}{2}$ Box 2 Handle ∇ doz. \$4. dia 10 $\frac{1}{2}$ Foot dia 45&10 $\frac{1}{2}$ Ship, common ∇ doz. \$1. net Wilson Mfg Co. dia 10 $\frac{1}{2}$
NUTS AND WASHERS.	SCREW DRIVERS.
Zinc and Tin. dia 60&10 $\frac{1}{2}$ Brass and Copper dia 50 $\frac{1}{2}$ Malleable (Hammer's) ∇ doz. \$5. dia 10 $\frac{1}{2}$	Douglas Mfg Co. dia 20&10 $\frac{1}{2}$ Dixon's dia 40 $\frac{1}{2}$ Cycles Mfg Co. dia 70&10&10 $\frac{1}{2}$ Stanley Rule & Level Co., " Van. II No. 50&10 $\frac{1}{2}$ Stanley Rule & Level Co.'s Bl'ds. dia 50 $\frac{1}{2}$ Ratchet dia 25 $\frac{1}{2}$ Clark's Patent dia 25 $\frac{1}{2}$ Shepardson. dia 25 $\frac{1}{2}$
OILERS.	SCREWS.
Zinc and Tin. dia 60&10 $\frac{1}{2}$ Brass and Copper dia 50 $\frac{1}{2}$ Malleable (Hammer's) ∇ doz. \$5. dia 10 $\frac{1}{2}$	Fiat H'd Iron, list Dec. 27. '82. dia 70 $\frac{1}{2}$ Round Head Iron. dia 50 $\frac{1}{2}$ Flat Head Brass. dia 60 $\frac{1}{2}$ Round Head Brass. dia 15 $\frac{1}{2}$
PINNING IRONS.	FLAT IRON MACHINES.
Astor Pinning Machine each \$15. dia 20 $\frac{1}{2}$ Crown Pinning Machines. dia 25 $\frac{1}{2}$ 6 in., \$6. 10 in. \$8. each	Flat Head Bladed add 25 $\frac{1}{2}$ to net of invoice. Brass and Silver Capped. dia 40 $\frac{1}{2}$ Japanned, list of Pin Screws. dia 20 $\frac{1}{2}$ Coach, Patent Gimlet Point. dia 10 $\frac{1}{2}$ Coach, Common or Lag. dia 10&10 $\frac{1}{2}$ Bed. dia 55 $\frac{1}{2}$ Machine, Flat Head, Iron. dia 55 $\frac{1}{2}$ Machine, Round Head, Iron. dia 50&10 $\frac{1}{2}$ Bench, Iron. dia 20&10 $\frac{1}{2}$ Bench, Wood, Beech. ∇ doz. \$5.00 dia 10 $\frac{1}{2}$ Bench, Wood, Hickory. dia 20&10 $\frac{1}{2}$ Hand, Wood. dia 20&10 $\frac{1}{2}$ Hand Bail, Sargent's. dia 60&10 $\frac{1}{2}$ Hand Rail, Humason, Beckley & Co. dia 40&10 $\frac{1}{2}$ Hand Rail, Am. Screw Co. dia 1.81. dia 70 $\frac{1}{2}$ Jack (Wilson's). dia 25 $\frac{1}{2}$
PLANES AND PLANE IRONS.	SCREEN FRAMES AND FIXTURES.
Bench, First Quality. dia 20 $\frac{1}{2}$ Bench, Second Quality. dia 25 $\frac{1}{2}$ Molding. dia 15 $\frac{1}{2}$ Bailey's (Stanley R. & L. Co.) new list, Jan. 1889. dia 20&10 $\frac{1}{2}$	Standard Window Screens. dia 1. ∇ doz. \$4; 2. \$5 Door. No. 5, \$15; dia 40&10 $\frac{1}{2}$ Window Corner Irons, No. 3. dia 3's, \$2 Door. No. 6. \$3 " Door Latches, ∇ dozen. \$3.60; dia 50 $\frac{1}{2}$ Porter's Patent Window and Door Screen Frames: PER DOZ. SETS. In Im. Bl'k White. Walnut. No. 20. \$2.75. \$3.25 ∇ No. 21. 3.25. 4.00 ∇ No. 22. 5.50. 6.75 ∇ No. 23. 6.00. 7.50 ∇ No. 30. 9.00. 11.00 ∇
RAIL.	PORTER'S CORNERS.
Sliding Door, Wrought Brass. ∇ lb. 43c. dia 30 $\frac{1}{2}$ Sliding Door, Bronzed Writ. Iron ∇ ft. 12c. dia 32 $\frac{1}{2}$ Sliding Door, Iron, Painted. ∇ ft. 4c. dia 10&10 $\frac{1}{2}$ Barn Door. inch. % % % % %	No. 0. Corners and Sticks complete for a three-foot window. ∇ doz. sets. \$4 No. 1. Set for Window, + dia. sets. Bronzed. \$2.40; Nickel. \$5.62 No. 1. ∇ dia. sets. Bronzed. \$3.25; Nickel. \$7.50 No. 4. ∇ dia. sets. Bronzed. \$4.00; Nickel. \$8.00 No. 6. or Door. ∇ dia. sets. Bronzed. \$1.20; Nickel. \$3.00 No. 4. or Door. ∇ dia. sets. Bronzed. \$2.00; Nickel. \$4.00 No. 2. Door. ∇ dia. sets. Bronzed. \$6.75; Nickel. \$15.00 No. 3. ∇ dia. sets. Bronzed. \$2.00; Nickel. \$4.00
PLUMBS AND LEVELS.	SHEARS AND SCISSORS.
Diaston's. dia 40 $\frac{1}{2}$ Stanley R. & L. Co.'s Pat. Adjustable. dia 65&10 $\frac{1}{2}$ Stanley R. & L. Co.'s Non-Adjustabl. dia 65&10 $\frac{1}{2}$ Chapin's Patent Adjustable. dia 65&10 $\frac{1}{2}$ Chapin's Non-Adjustable. dia 65&10 $\frac{1}{2}$ Standard Rule Co.'s New Adjustable. dia 65&10 $\frac{1}{2}$ Standard Rule Co.'s Non-Adjustable. dia 65&10 $\frac{1}{2}$ Pocket Levels. dia 65&10 $\frac{1}{2}$	American (Cast) Iron. dia 70&10 $\frac{1}{2}$ Pruning. see Pruning Hooks and Shears Barnard's Lamp Trimmers. ∇ doz. \$4.00 Tinners'. dia 15 $\frac{1}{2}$ Coun Shears. dia 80 $\frac{1}{2}$ Norfolk Shear Co. dia 75 $\frac{1}{2}$ Jersey Shears. dia 80 $\frac{1}{2}$ J. Wiss & Son, Nickle, 5&65 $\frac{1}{2}$ Japanned, 60&5 $\frac{1}{2}$
RIVETS.	SHOVELS AND SPADES.
Iron and Tinmed, new list, Dec. 10, 1881. dia 40 $\frac{1}{2}$ In bulk, new list, Dec. 10, 1881. dia 40 $\frac{1}{2}$ Copper Rivets and Burrs. dia 45 $\frac{1}{2}$ Nos. 7 8 9 10 11 12 13 14 15 ∇ lb. 49c. 50c. 52c. 54c. 56c. 58c. 60c. 65c. 70c.	Ames, New List, July 1, 1881. dia 15 $\frac{1}{2}$ Griffiths. dia 50&5 $\frac{1}{2}$ Remington's (Lowman's Patent). dia 30 $\frac{1}{2}$ Rowland's. dia 60 $\frac{1}{2}$ Kimball's. dia 35 $\frac{1}{2}$ Hussey, Bins & Co. dia 15 $\frac{1}{2}$
RIVET SETS.	SHUTTER HINGES.
RODS.	CLIPS.
Stair, Brass. dia 25 $\frac{1}{2}$ Stair, Black Walnut. ∇ c. ∇ doz.—net	Clark's Improved Shutter Hinge, Nos. 0, 1, 1 $\frac{1}{2}$, 2, 2 $\frac{1}{2}$, 3. dia 75 $\frac{1}{2}$ Iron and Brass Head, R. & E. List. dia 60&10&2 $\frac{1}{2}$ Polished Steel, Now List. dia 50&10&2 $\frac{1}{2}$
RULES.	SLIDING BELLS.
Boxwood. Ivory.	Arctic and Polar. dia 30 $\frac{1}{2}$ Loose and neck and body strap. dia 50 $\frac{1}{2}$
SAFETY PIN.	SPOKE TRIMMERS.
Chapin's. dia 70&10 $\frac{1}{2}$ ∇ dia 40&10 $\frac{1}{2}$	Bonney's. ∇ doz. \$10. dia 40&5 $\frac{1}{2}$ Stearns'. ∇ doz. \$9. dia 20&10 $\frac{1}{2}$ Ives'. No. 1, \$15; No. 2, \$19 ∇ doz. \$5.50&10 $\frac{1}{2}$ Douglas'. ∇ doz. \$9. dia 15 $\frac{1}{2}$
SAND IRONS.	SILVER-PLATED WARE.
SAND HEATING, Charcoal. ∇ doz. \$9.00 net	Wm. Rogers Manf. Co. dia 50, 55 $\frac{1}{2}$ Holmes, Boot & Hayden. dia 40&10&5 $\frac{1}{2}$ Brown Bros. dia 40&10&5 $\frac{1}{2}$ Wallace's Steel Silver Plated. 35% & 10 $\frac{1}{2}$ Rogers Bros 1847. 50 $\frac{1}{2}$ C. Rogers & Bro. 40, 45 & 5 $\frac{1}{2}$
SASH CORD.	SILVER PLATED HOLLOW WARE.
Common. ∇ lb. 14c. net	Wm. Rogers Manf. Co. dia 40, 45 & 5 $\frac{1}{2}$ Meriden Britannia Co. 35% $\frac{1}{2}$
Patent. ∇ lb. 17c. @28c. net	SPoons.
Silver Braided Lake Hemp. ∇ lb. 50c. dia 10 $\frac{1}{2}$	Britannia. dia 60&10 $\frac{1}{2}$ Tinned. Iron, Table and Tea. 65 $\frac{1}{2}$ Tinned Iron Basting. 65 $\frac{1}{2}$ German Silver. dia 40 $\frac{1}{2}$
Silver Braid, Lake White Cotton. ∇ lb. 50c. dia 10 $\frac{1}{2}$	STONE.
Silver Braided Lake Drab Cotton. ∇ lb. 55c. dia 10 $\frac{1}{2}$	Hindostan No. 1, 5c.; A. & C. net
Silver Lake Cage Laid, Bengal unbleached Hemp. 17 cts. dia 10 $\frac{1}{2}$	Sand Stone. ∇ lb. 6c. dia 35&10 $\frac{1}{2}$ Washtone Stone. No. 1, ∇ lb. 16. net Wa-bita Stone, chips. No. 1, ∇ lb. 45c. net.
Russian Hemp. 19 cts. dia 10 $\frac{1}{2}$	Arkansaw. \$1.50 ∇ lb. net
Italian Hemp. 34 cts. dia 10 $\frac{1}{2}$	SQUARES.
SASH WEIGHTS.	STEEL. dia 50 $\frac{1}{2}$; full cases, dia 50&10 $\frac{1}{2}$ Iron. dia 50 $\frac{1}{2}$; full cases, dia 50&10 $\frac{1}{2}$
Solid Eyes, in 500-lb. lots and over. ∇ lb. 14c. net	Nickel Plated. add \$2.50@4 ∇ doz. net
SUSANAGE STUFFERS OR FILLETS.	TRY SQUARES.
Miles. ∇ doz. \$20. dia 25&5 $\frac{1}{2}$	Steel. dia 50 $\frac{1}{2}$; full cases, dia 50&10 $\frac{1}{2}$ Iron. dia 50 $\frac{1}{2}$; full cases, dia 50&10 $\frac{1}{2}$
Perry. ∇ doz. No. 0, \$21. dia 35 $\frac{1}{2}$	Tin. dia 50 $\frac{1}{2}$; full cases, dia 50&10 $\frac{1}{2}$
Enterprise Mfg Co. dia 25 $\frac{1}{2}$	Nickel Plated. add \$2.50@4 ∇ doz. net
Monarch. ∇ doz. 40 $\frac{1}{2}$	TRY SQUARES.
RAWS.	Steel. dia 50 $\frac{1}{2}$; full cases, dia 50&10 $\frac{1}{2}$ Iron. dia 50 $\frac{1}{2}$; full cases, dia 50&10 $\frac{1}{2}$
Boynton's Lightning Cross Cut, new list. dia 40 $\frac{1}{2}$	IRON CITY TOOL WORKS.
Boynton's Circular and Mill. dia 40 $\frac{1}{2}$	Bench-Wilson's. dia 45 $\frac{1}{2}$ Trenton. dia 45 $\frac{1}{2}$
Boynton's Ice. dia 25 $\frac{1}{2}$	Parker's. dia 25 $\frac{1}{2}$ Trenton. dia 20 $\frac{1}{2}$
Boynton's Lighting Hand, Panel and Rip. dia 25 $\frac{1}{2}$	Prestiss. dia 25 $\frac{1}{2}$ Trenton. dia 20 $\frac{1}{2}$
Diaston's Circular. dia 40 $\frac{1}{2}$	Bonney's. dia 25 $\frac{1}{2}$
Diaston's Mill. dia 40 $\frac{1}{2}$	Well Wheels. dia 60&10&10 $\frac{1}{2}$
Diaston's Cross Cut. dia 40 $\frac{1}{2}$	
Diaston's Hand, Panel, Rip, &c. dia 20 $\frac{1}{2}$	
Hubbard, Bakewell & Co. Circular and Rip. dia 40&5 $\frac{1}{2}$	
Hubbard, Bakewell & Co. Cross Cut. dia 30. ft.	
Hubbard, Bakewell & Co., One-Man's, X Cut. dia 40 $\frac{1}{2}$	
Hubbard, Bakewell & Co., Mill Saws. dia 40&5 $\frac{1}{2}$	
Peace Circular and Mill. dia 40 $\frac{1}{2}$	
Peace Hand, Panel and Rip. dia 25 $\frac{1}{2}$	
Peace Cross Cut. dia 35 $\frac{1}{2}$	
Peace Band Saws, all widths. dia 10 $\frac{1}{2}$	
Webster's Hand, Rip. dia 25&10 $\frac{1}{2}$	
Griffin's Back Saws and Blades. dia 30 $\frac{1}{2}$	
PAW FRAMES.	
White. ∇ doz. \$1.05. dia 10 $\frac{1}{2}$	
Saw Rods. ∇ lb. 10 ft. dia 10&10 $\frac{1}{2}$	
SAW SETS.	
Stillman's Genuine. ∇ doz. \$3.50 and \$5.50. dia 10 $\frac{1}{2}$	
Stillman's Imitation. ∇ doz. \$3.25. dia 30&10 $\frac{1}{2}$	
Common Lever. ∇ doz. \$2.00. dia 30&10 $\frac{1}{2}$	
Leach's. No. 0, \$8.00. No. 1, \$15; dia 15 $\frac{1}{2}$	
Hammer, Hotchkiss. \$6.50. dia 10 $\frac{1}{2}$	
Aiken's Genuine. \$12.00. dia 50&10 $\frac{1}{2}$	
Aiken's Imitation. \$7.00. dia 50 $\frac{1}{2}$	
Diaston's. dia 20 $\frac{1}{2}$	
Morill's. No. 1, \$15; No. 5, \$22. dia 35&10 $\frac{1}{2}$	
SCALES.	
Hath. b. Counter, No. 171. ∇ doz. \$42. dia 37&10 $\frac{1}{2}$	
Hath. b. Tex. No. 161. ∇ doz. \$15.00. dia 37&10 $\frac{1}{2}$	
Union Platform, Keystone. ∇ doz. 45 $\frac{1}{2}$	

Rat. "Decoy" ∇ doz. \$10.00. dia 10 $\frac{1}{2}$
Delusion Mouse, per doz. \$1.50
Lothrops' Brick and Plastering. dia 25 $\frac{1}{2}$
Reed's Brick and Plastering. dia 15 $\frac{1}{2}$
Disston's Brick and Plastering. dia 20 $\frac{1}{2}$
Clement & Maynard's. dia 30 $\frac{1}{2}$
Worrall's Brick. dia 20 $\frac{1}{2}$
Brades & Waiby's. dia 20 $\frac{1}{2}$
Garden. dia 55 $\frac{1}{2}$
TROWELS.
Handy Truck. dia 25 $\frac{1}{2}$
Penfield Block Co. dia 18. dia 30 $\frac{1}{2}$
Peerless, with Cogs. No. 3. 54.00
Peerless, with Cogs. No. 4. 66.00
Eureka, No. 3. ∇ doz. 42.00
MISCELLANEOUS.
"Diamond" Vegetable Grater. \$5.00 ∇ doz. 10 $\frac{1}{2}$
Rotary Knife Potato Pare. \$18.00 ∇ doz. net
Metallic Shingles. \$5.50 and \$6.50 per square.
Hopper Cherry Seeders. \$5.00 ∇ doz. net

"Diamond" Vegetable Grater. \$5.00 ∇ doz. 10 $\frac{1}{2}$

Rotary Knife Potato Pare. \$18.00 ∇ doz. net

Metallic Shingles. \$5.50 and \$6.50 per square.

Hopper Cherry Seeders. \$5.00 ∇ doz. net

"Diamond" Vegetable Grater. \$5.00 ∇ doz. 10 $\frac{1}{2}$

Rotary Knife Potato Pare. \$18.00 ∇ doz. net

Metallic Shingles. \$5.50 and \$6.50 per square.

Hopper Cherry Seeders. \$5.00 ∇ doz. net

"Diamond" Vegetable Grater. \$5.00 ∇ doz. 10 $\frac{1}{2}$

Rotary Knife Potato Pare. \$18.00 ∇ doz. net

Metallic Shingles. \$5.50 and \$6.50 per square.

Hopper Cherry Seeders. \$5.00 ∇ doz. net

"Diamond" Vegetable Grater. \$5.00 ∇ doz. 10 $\frac{1}{2}$

Rotary Knife Potato Pare. \$18.00 ∇ doz. net



Non-Mechanical, No-Chimney LAMPS!

The McLewee Patent.

Burns WITHOUT a Chimney.

NO MACHINERY TO GET OUT OF ORDER.

Absolutely Odorless and Non-Explosive!

Give a larger and brighter flame than can be obtained with a chimney. The combustion is perfect, and they are therefore free from the slightest odor. The globes having large openings at both top and bottom are never broken by the heat. Are superior to all mechanical lamps, in that they require no winding up and have no complicated machinery to get out of order. They are made with both *Single* and *Duplex* Burners.

We have had the light given by the Duplex measured by the U. S. Government Lighthouse Department, and it gives 50 per cent. more light than either the Mechanical or Student Lamps.

It is unquestionably the Best and Safest Lamp ever made.

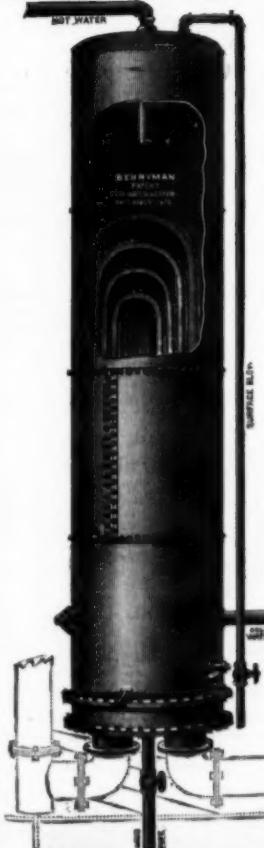
PRICES:

Stand Lamp, (Nickel Plated,) Single Burner, Complete, - - - - -	\$4.
Duplex, made in two sizes, - - - - -	\$5 and \$6.
Hanging Lamps from - - - - -	\$3 to \$12.

Discounts to the Trade.



THE BERRYMAN Patent Feed Water Heater Purifier



The Shells of the Berryman are of C H No. 1 iron, and tested to 175 pounds cold water. Every heater is guaranteed to be absolutely tight, making it the only Feed Water Heater applicable to a Condensing Engine, increasing the vacuum and imparting a high degree of heat in the feed water, saving eight to ten per cent.

THE BERRYMAN

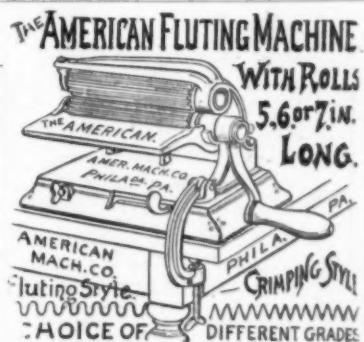
has been in constant use for more than 12 years in all parts of the United States and Europe, and none have ever needed repairs. It gives the highest result attainable by the use of exhaust steam.

Boiler repairs, and the vexation by shutting down when in a hurry, are saved. The trouble and expense of throwing out a poor heater and putting in a good one are saved by the use of **The Berryman Feed Water Heater and Purifier.**

All Oil or Fatty Matter is excluded from the boilers, as the feed water and exhaust steam do not come in contact by the use of **The BERRYMAN Feed Water Heater and Purifier.**

I. B. DAVIS & SON,

Sole Proprietors & Manufacturers in the U. S. Office & Works, HARTFORD, CONN.



Seasonable Specialties of the American Machine Co.

PHILADELPHIA.

Baltimore Agents--MORITZ & KEIDEL, 48 and 50 German St.

PHOSPHOR-BRONZE

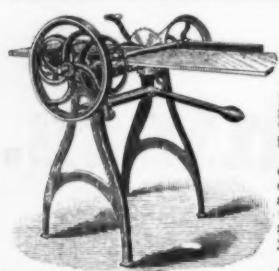


The celebrated alloy in Wire, Rods, Sheets, Bolts, Wire Ropes, Wire Cloth, Castings, Ingots, etc. Pamphlets and particulars on application to

THE PHOSPHOR-BRONZE SMELTING CO., Limited,

No. 512 ARCH STREET, PHILADELPHIA, PA.

Owners of the U. S. Phosphor-Bronze Patents.
Sole Manufacturers of Phosphor-Bronze in the United States.

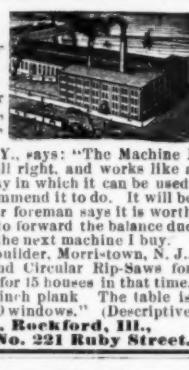
**BARNES'**

Patent Food and Steam Power Machinery. Complete outfitts for

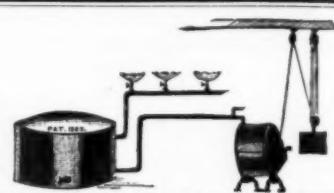
BUSINESS IN THE WORKSHOP.
Lathe for Wood or Metal. Circular Saws, Scroll Saws, Formers, Mortise, Tenoners, etc., etc. Machines on trial, if desired.

NORRIS COOK, Hendersonville, N. Y., says: "The Machine I ordered from you is at hand. It is all right, and works like a charm. We have tried it in every way in which it can be used and find that it does all that you recommend it to do. It will be worth its cost to me in one year. Our foreman says it is worth \$300 to us. I have ordered the ag't to forward the balance due you. I shall want your Tenoner for the next machine I buy."

CLARENCE F. LEE, carpenter and builder, Morristown, N. J., says: "I have had one of your Hand Circular Rip-Saws for about three months, and am much pleased with it. Have done the ripping for 15 houses in that time, which is over forty miles through inch boards. Have ripped as high as 3-inch plank. The table is also good for rabbing; have rabbed all jamb's and saved all drips for 30 windows." (Descriptive Catalogue and Price-List free.) Address **W. F. and John Barnes, Rockford, Ill., No. 221 Ruby Street.**



Patent
April 6, 1881. Registered July 26, 1881.
BATES, Hand Elevation

**THE BROUGH GAS MACHINE.**

We desire to call your attention to the advantages of this Machine, patented Sept. 4, 1883, for lighting Churches, Hotels, Dwellings, Factories, etc. There is no smoke, and it is free from condensation in pipes. It can be applied to Stoves and used for Heating Purposes. It is also sold on reasonable terms. For terms and all information address

Brough Gas Machine Works.

Office, 32 Lexington Street, BALTIMORE, MD.

WILEY & RUSSELL MFG. CO., Greenfield, Mass.**MORTON, REED & CO.**

BALTIMORE AGENTS:

Lightning Screw Plates, Bolt Cutters, Fine Taps and Dies, Green River Drill-ing Machines, Punching Presses, Tire Upsetters, Tire Headers, and other Labor-Saving TOOLS.

Adapted for Warehouses, Stores, Factories, Hotels, Public Institutions, and every place where merchandise, etc., is transferred from one story to another.

JAMES BATES, Patentee.

Nos. 1, 3 & 5 President Street, BALTIMORE

**THE BRADSTREET
MERCANTILE + AGENCY**

HAS NOW BEEN

Under its present successful management for the past seven years,

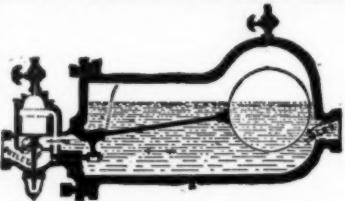
And during that time its business has more than trebled, while its facilities have proportionately increased.

No expense is considered too great in obtaining and applying to the conduct of the business all possible improvements. With its present system for obtaining and promulgating information, this Agency is justly regarded by its patrons as authority on all matters affecting commercial credit. Its ramifications are greater and its business larger than any similar organization in the world conducted in one interest and under one management.

You are respectfully invited to investigate, and, if in need of an Agency, to test its ability to serve you.

CHAS. F. CLARK, President.Baltimore Office,—American Building,
H. KERSHAW, Supt.*** THE INK ***
WITH WHICH THIS PAPER IS PRINTED
IS MADE BY THE
QUEEN CITY PRINTING INK CO.
CINCINNATI, O.

TOOLS for Machinists, Amateurs, Jewellers, Model Makers, Blacksmiths, Carpenters, Cosemakers, etc. Send 20 cts. for new Metal Worker's Catalogue, 300 Pages. Wood Worker's Catalogue free.

TALLMAN & McFADDEN, Philadelphia, Pa.**The CURTIS STEAM TRAP.**

Has main valve outside. Air valve inside.

MANUFACTURED BY

Curtis Regulator Co., 158 Beverly St., Boston.

GENERAL AGENCIES:

109 Liberty St., New York; No. 19 N. 7th St., Philadelphia; 56 and 58 Market St., Chicago; No. 49 Holliday St., Baltimore.

NEILSON CURTIN, Agent.**1837. NOVELTY WORKS. 1863.****JAMES MURRAY & SON,
Machinists and Millwrights**

Engines and Boilers, Mills of all kinds, Marine Railways, &c. Improved Clay Tempering Machinery, Steam or Horse Power. Phosphate Machinery, Crushers, Rollers, Mixers, &c. &c.

40, 42 & 44 York Street,

NEAR LIGHT, BALTIMORE.

Repairing of all kinds promptly done.

The Seibert Cylinder Oil-Cup Co.

SOLE MANUFACTURERS OF

Oil Cups for Locomotives, Marine and Stationary Engine Cylinders, and Gates Patents with Sight Feed.

Take Notice.

The "Sight Feed" is owned exclusively by this company. See Judge Lowell's decision in the United States Circuit Court, District of Massachusetts, Feb. 23d, 1882.—All parties are hereby notified to desist the use, manufacture or sale of INFRINGING CUPS, as we shall vigorously pursue and prosecute all infringers.

The SEIBERT CYLINDER OIL-CUP CO.**53 Oliver St., Boston, Mass.**

OUR PATENT SAW MILL
TAYLOR MFG. CO., Chambersburg, Pa.
JACKSON & TYLER, Agents, Baltimore.

ROLL AND SHEET BRASS.	
Brown & Sharpe's Gauge the Standard.	
New List, Jan. 17, 1884.	
Dis 10@30%	
COMMON HIGH BRASS.	
Wider than 10	2 10 12 14 16 18
and including 10	12 14 16 18 20
To No. 20, inclusive	.31 .22 .23 .25 .27 .29
Nos. 21, 22, 23 and 24	.22 .23 .24 .26 .28 .30
Nos. 25 and 26	.22 1/2 .23 1/2 .24 1/2 .27 .29 .31
Nos. 27 and 28	.23 .24 .25 .28 .30 .32
Add 9cts. $\frac{1}{2}$ lb. for sheets cut to particular widths and lengths.	
Add $\frac{1}{4}$ c. $\frac{1}{2}$ lb. additional on each number thinner than Nos. 28 to 38, inclusive.	
Brass thinner than No. 38 is Platers' Brass.	
at .55 cts.	
Printers' plates .45 cts.	
Printers' Sheets and Plates cut to particular sizes and lengths to No. 20, inclusive .90 cts.	
Brazing, Spinning and Spring Brass, one cent more than common High Brass.	
Low Brass four cts. $\frac{1}{2}$ lb. more than common High Brass.	
Gilding, Oreide and Bronze seven cts. $\frac{1}{2}$ lb. more than common High Brass.	
SLITTING METAL.	
Add to list as follows:	
Over $\frac{1}{2}$ in. to 2 in., inclusive, Nos. 12 to 20, inclusive	1 1/2
Over $\frac{1}{2}$ in. to $\frac{3}{4}$ in., inclusive, Nos. 12 to 20, inclusive	1
$\frac{1}{4}$ in. and narrower, not less than	4
Over $\frac{1}{2}$ in. to 2 in., inclusive, Nos. 21 to 28, inclusive	1
Over $\frac{1}{2}$ in. to $\frac{3}{4}$ in., inclusive, Nos. 21 to 28, inclusive	2
$\frac{1}{4}$ in. and narrower, Nos. 21 to 28, inclusive, not less than	6
Over $\frac{1}{2}$ in. to 2 in., inclusive, Nos. 29 to 32, inclusive	1 1/2
Over $\frac{1}{2}$ in. to $\frac{3}{4}$ in., inclusive, Nos. 29 to 32, inclusive	3
$\frac{1}{4}$ in. and narrower, Nos. 29 to 32, inclusive, not less than	12
Over $\frac{1}{2}$ in. to 2 in., inclusive, No. 33 and thinner	3
Over $\frac{1}{2}$ in. to $\frac{3}{4}$ in., inclusive, No. 33 and thinner	6
$\frac{1}{4}$ in. and narrower, No. 33 and thinner, not less than	18
Slit Metal cut to particular lengths, $\frac{1}{2}$ lb. additional	

PLATE'OR GOLD METAL.

In bars	40c.
In ingots	46c.
In ingots, planed or polished	46c.

BRASS TUBING.

Brown & Sharpe's Gauge the Standard for all Tubing.	Per lb.
Plain, to No. 20, inclusive.	
Above 5-16 Inch to 3 Inches, inclusive.	40c.
Plain, to No. 30, above 3 inches.	45c.
" 5-16 Inch to No. 20.	45c.
" $\frac{1}{4}$ inch.	60c.
" 2-16 Inch.	1 00
" $\frac{1}{4}$ inch.	1 50

**SCALES,**

Anvils, Vises, Portable Forges, Blacksmith's Tools, Hardware Specialties.

Send for Price-List.

Chicago Scale Co., CHICAGO.

**REMOVAL:
Monumental Type Foundry!**

JOHN G. MENGE & CO.
Type Founders and Electrotypers,
No. 31 German Street, near Calvert,

WE take pleasure in calling the attention of our patrons, Printers, Newspaper Publishers, and the public in general to the removal of our establishment to the above desirable location. Our business has outgrown our present quarters, and we have fitted up three entire floors of this large and commodious building in the most complete manner for the execution of our work, having added to our already extensive facilities all the latest and most approved machinery that can be used in the manufacture of TYPE, ELECTROTYPE, BRASS RULE, and the GENERAL PRINTERS' SUPPLY business, making it now by far the best equipped establishment of this kind in the city. We manufacture a line of beautiful Book and Newspaper Type, and use a superior metal in the manufacture of same, which we will furnish at very low prices, and guarantee satisfaction.

JOHN G. MENGE & CO., 31 GERMAN ST.

SECOND-HAND.

1 Engine Lathe, L. W. Pond.
1 Engine Lathe, 15 in. x 4 and 5 ft.
1 Engine Lathe, 24 in. x 5, 6 and 8 ft.
each, Engine Lathes, 16 in. x 6, 7, 8 and 10 ft.
each, Engine Lathe, 18 in. x 8, 10, 12, 14 and 16 ft.
each, " 22 in. x 8, 10, 12, 14 and 16 ft.
each, " 24 in., any length of bed to 26 ft.
each, " 26 in., " " " " 26 ft.
each, " 28 in., " " " " 28 ft.
each, " 30 in., " " " " 28 ft.
each, " 36 in., " " " " 29 ft.
each, " 42 in., " " " " 29 ft.
each, " 48 in., " " " " 29 ft.
each, " 15 in. x 4, 6 and 8 ft. Rod feed only.

each, Turret Lathes, 13 and 14 in. x 14 in. x 6 ft.
1 Fox Turret Lathe, 16 in. x 6 ft.

1 Fox Lathe, 15 in. x 5 ft. Round arbor.

each, Hand Lathes, 10, 12, 15 and 18 in. swing.

Iron Planer, 18 in. x 18 in. x 3 ft.

each, Iron Planers, 20 in. x 20 in. x 4 and 5 ft.

each, Iron Planer, 24 in. x 24 in. x 5 ft.

each, Iron Planer, 26 in. x 26 in. x 7 and 10 ft.

Iron Planer, 30 in. x 30 in. x 10 ft.

each, " 36 in. x 36 in. x 10 ft.

each, 16, 20, 22, 25, 28, 30, 34 and 38 in. Upright Drills.

1 each, Nos. 2, 3, 4 and 6 Spindle Gang Drills.

each, 8, 10, 12, 15, 18 and 24 in. Shapers.

each, Nos. 1, 2, 3 and 4 Milling Machines.

No. 2 Milling Machine, Lincoln Pattern.

New Pattern Milling Machine, Grant & Bogert.

each, Nos. 2, 4, 5 Wire Feed Screw Machines.

each, Nos. 3 and 5 Spindle Nut Tapper.

Boring and Tapping Mill, each 50 and 72 in.

Gray's Screw Machine, to take all sizes to 1 in.

32 in. Gear Cutter.

Grant & Bogert Cutter Grinder.

ALL KINDS OF MACHINISTS' TOOLS AND SUPPLIES.

1 Engine Lathe, L. W. Pond.

1 Engine Lathe, 15 in. x 8 ft. Fair order, with ta-

per attachment.

1 Planer, 24 x 34 x 6 ft.

each, " 20 x 20 x 5 ft.

each, " 50 x 50 x 17 ft.

2-Spindle Edging Machine.

Crank Planer.

9-in. Shaper.

Lincoln Pattern No. 2 Millers.

Bolt Cutter, to take sizes to 1 inch.

Horizontal Boring Machine, 36-in. swing, will

take 6 feet between centers.

30 in. Plain Upright Drill.

ALL KINDS OF MACHINISTS' TOOLS AND SUPPLIES.

New York Agency of the Tanite Co.

Grant & Bogert Machine Tool Works,

AND FOR THE

"New Polished" Shafting.

H. PRENTISS & CO.

42 Dey Str., New York.

New York Agency of the Tanite Co.

Grant & Bogert Machine Tool Works,

AND FOR THE

"New Polished" Shafting.

H. PRENTISS & CO.

42 Dey Str., New York.

New York Agency of the Tanite Co.

Grant & Bogert Machine Tool Works,

AND FOR THE

"New Polished" Shafting.

H. PRENTISS & CO.

42 Dey Str., New York.

New York Agency of the Tanite Co.

Grant & Bogert Machine Tool Works,

AND FOR THE

"New Polished" Shafting.

H. PRENTISS & CO.

42 Dey Str., New York.

New York Agency of the Tanite Co.

Grant & Bogert Machine Tool Works,

AND FOR THE

"New Polished" Shafting.

H. PRENTISS & CO.

42 Dey Str., New York.

New York Agency of the Tanite Co.

Grant & Bogert Machine Tool Works,

AND FOR THE

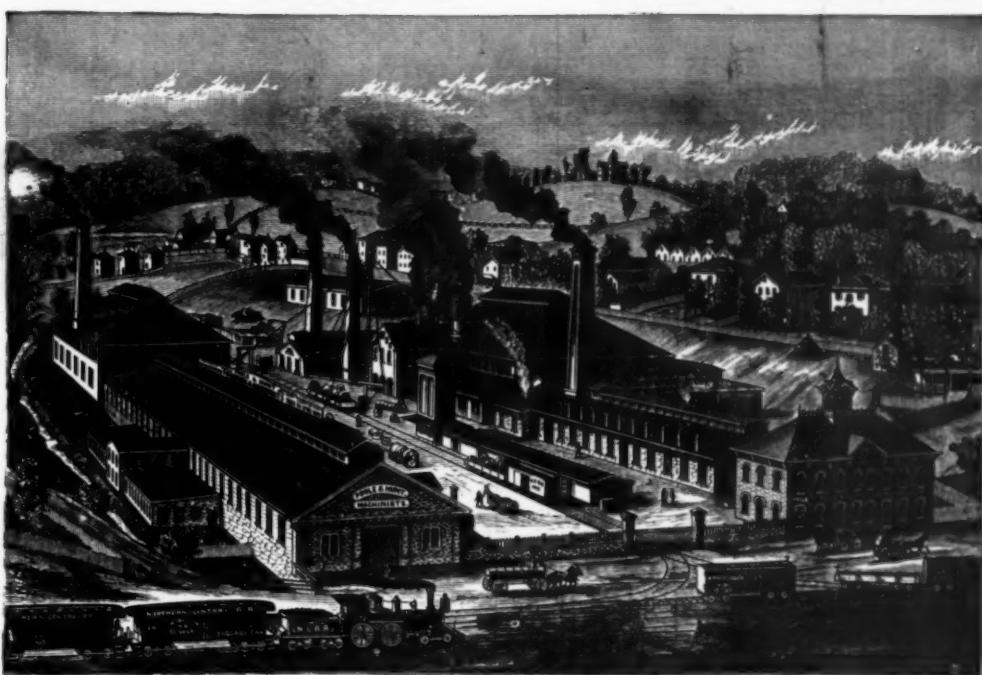
"New Polished" Shafting.</p

ESTABLISHED

—1851.—

POOLE & HUNT, Founders and Machinists.

Machine
MOULDED
MILL
GEARING



Shafting
Pulleys,
HANGERS
Pedestals.

Our plant for the production of **Machine-Moulded Mill Gearing** is unequalled in the country, and we are prepared to fill orders with dispatch and at great saving in cost of patterns.

Poole & Hunt's Leffel Turbine Water-Wheel. Prices as low as any other first-class Wheel. **SHAFTING, PULLEYS, HANGERS and COUPLINGS**, of latest and most approved designs.

N. B.—Shipping Facilities the best in all directions.

Lists of Our Gearing Mailed on Application

POOLE & HUNT, BALTIMORE, MD

Send for Pamphlet.

Send for Price-List.



STEPHENS' VISES.

FLAT and SWIVEL BASES; SOLID JAWS; STEEL FACED and SOLID STEEL BARS; ADJUSTABLE ATTACHMENTS.

For Jewelers, Machinists, Car and Locomotive Works and all other Vice Work they maintain their superiority in strength, firmness of grip, durability and make, while affording the greatest economy in time and labor. Special Vises for Amateurs and Wood-Workers. Sold by the Trade. Send for Circular.

NATHAN STEPHENS, Proprietor,
41 Dey St., NEW YORK.



Saranac Horse Nail Co.

PLATTSBURGH, N. Y.

A. WILLIAMS, Pres't. and Treas.

S. F. VILAS, Vice-Pres't.

W. S. GUIBORD, Sec'y.

The cuts illustrating this advertisement are of Nails twisted and bent when cold.

AGENTS:

ELY & WILLIAMS, — — — PHILADELPHIA AND NEW YORK.
S. H. & E. Y. MOORE, — — — — — CHICAGO.
SLIGO IRON STORE CO., — — — — — ST. LOUIS.
S. G. B. COOK & CO., — — — — — BALTIMORE.
CORRESPONDENCE SOLICITED.

PECK'S CHAMPION BLADE AXES & EDGE TOOLS



HAVE NOW BECOME
A STANDARD ARTICLE
WITH THE TRADE.



These Goods are not Cheap Goods,—they rank with Blood's and Hunt's, and are only sold in competition with that class of Goods.

Sold by all the Leading Jobbers in the West. Ask your Dealer for them. Send for Catalogue and Price List.



PECK'S SOLID STEEL
IN THE
BEST HATCHET
IN THE
MARKET TO-DAY.

Manufactured by

A. G. PECK & CO. - COHOES, N. Y.

Standard Pulley Covering Company.
Guaranteed to give a Large Increase of Power.

Refers by Permission to the following:

Sun Office, Herald Office, A. Hoen & Co., Murrill & Kelser, Brush Electric Light Co., Jos. Thomas & Sons, U. S. Electric Light Co., E. Wise & Sons, Marburg Bros., Smith, Dixon & Co., Union File Works, C. A. Gambrell Mfg. Co.

Gen. Southern Agent for Potter's Belt Hooks, Alligator and Falcon Wrenches

GEO. M. LINDSAY, 95 Sharp St., Baltimore.





Wood Engravings of any subject about this size and quantity of work engraved to order for \$8. Larger or smaller at a proportionate rate.

C. W. CRANE & CO.,
Wood Engravers,
100 NASSAU STREET, NEW YORK CITY.

[Illustrated Price-List Free.]

ACME * ENGRAVING * STUDIO,

100 Nassau Street, New York City.

C. W. Crane

Signatures this size to order, 60 cts.



Wood Engravings of any subject about this size and quantity of work engraved to order for \$8. Larger or smaller at a proportionate rate.

ILLUSTRATIONS FOR CIRCULARS, CATALOGUES, &c.



Views of Buildings this size engraved to order for \$8. Larger or smaller at a proportionate rate.

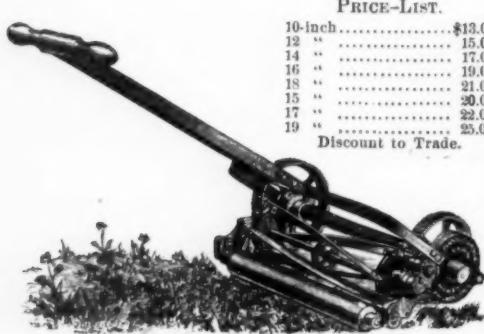
To Merchants, Manufacturers and Others :

As a well-executed Wood Engraving can express more than a whole volume of words we present to the public a collection of engravings adapted to the constantly-growing demand for this indispensable method of advertising the wares and inventions of merchants, manufacturers, &c. The price given under each specimen cut will readily enable our patrons to approximate the cost of cuts of about the same size and style.

The Pennsylvania Lawn Mower.

PRICE-LIST.

10-inch	\$12.00
12 "	15.00
14 "	17.00
16 "	19.00
18 "	21.00
15 "	20.00
17 "	22.00
19 "	25.00
Discount to Trade.	



LLOYD & SUPPLEE HARDWARE CO., Phila.
E. WHITMAN, Sons & Co., Baltimore.

THE Pennsylvania Lawn Mower.

We defy any one to produce its equal.

We have now in our possession a 16-inch Pennsylvania Mower, which was sold to an institute in this State, and was used nearly every working day constantly from the day it was purchased until we got it in our possession. This Mower cut five hundred acres of grass, was sharpened but once during use, and although it has not been sharpened since it came from the ground, nevertheless will cut the finest paper. We now have it in our store on exhibition, and we only secured it by giving a new machine, the parties not wanting to part with it.

The Quaker City Lawn Mower.

REDUCED PRICE.

10-inch	\$11.00
12 "	13.00
14 "	15.00
16 "	17.00

Discount to Trade.



LLOYD & SUPPLEE HARDWARE CO., Phila.
E. WHITMAN, Sons & Co., Baltimore.

The Quaker City Lawn Mower

This is by no means an inferior Mower because at less list price. The saving in manufacture being because it is a centre cut instead of a rear cut Mower. Particularly adapted for the Southern Trade, and at the price we now offer them parties with the smallest lawns cannot well afford to permit their grass to grow wild, or be ruined by use of grass hook, sickle or scythe.

LLOYD & SUPPLEE HARDWARE CO.

PHILADELPHIA.

E. WHITMAN, Sons & Co., Baltimore.

EXCELSIOR PRINTING COMP'Y

Joseph E. Airey, Proprietor.

FINE COMMERCIAL

PRINTING.

Extensive Assortment of Newest Styles of Type,
Tasty Composition,
Unsurpassed Presswork,
And other facilities for the execution of all classes of Fine Work in the highest style.
Orders by mail receive careful attention, and work delivered when promised.

Catalogue Work a Specialty. Send for Estimate. The Prices will astonish you.
Corner FREDERICK and SECOND STS., Baltimore, Md.
Don't forget to mention the MANUFACTURERS' RECORD.

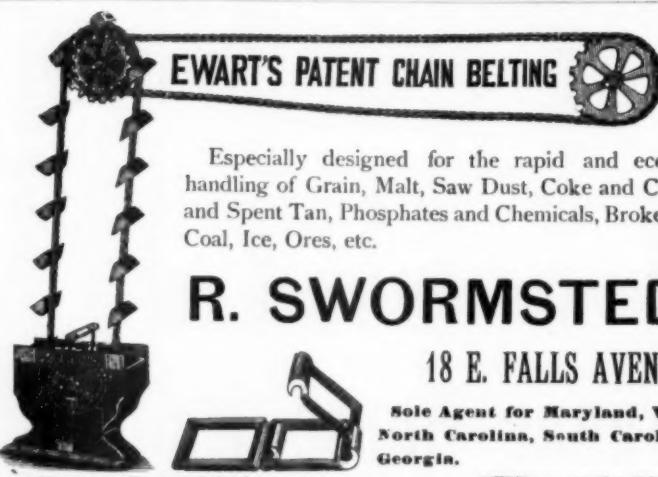
THE CLARK MFG. CO.



MANUFACTURERS OF

Builders' Hardware, Door Butts, Door Locks,
DOOR KNOBS, (with Patented Improvements),
Of Genuine Bronze and Other Finishes.

SHUTTER HINGES, GATE HINGES, PULLEYS, &c.
BUFFALO, N. Y.



Ewart's Patent Chain Belting

Especially designed for the rapid and economical handling of Grain, Malt, Saw Dust, Coke and Clay, Dry and Spent Tan, Phosphates and Chemicals, Broken Stone, Coal, Ice, Ores, etc.

R. SWORMSTEDT,

18 E. FALLS AVENUE,

Sole Agent for Maryland, Virginia,
North Carolina, South Carolina and
Georgia.

Please mention this paper.



Send for Illustrated Catalogue.

ESTABLISHED 1845.

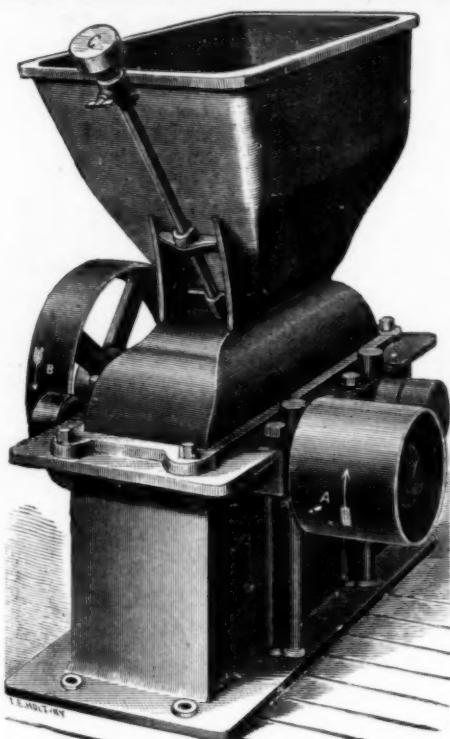
The Oldest Saw Manufactory in the South.

TOLAND & SON, 85 N. Front St., Baltimore.

Particular attention paid to Large Circular Work. We warrant our Small Circular Saws to stand more strain, without buckling or cracking, than any other make. We make all kinds of Saws,—Ensilage, Feed, Meat Choppers, and other knives made to pattern, warranted equal to the Best Forged Knives, and CHISELES.

N. B. We make no charge for hammering any Large Circular Saw that we can't make "go."

GIVE US A TRIAL.



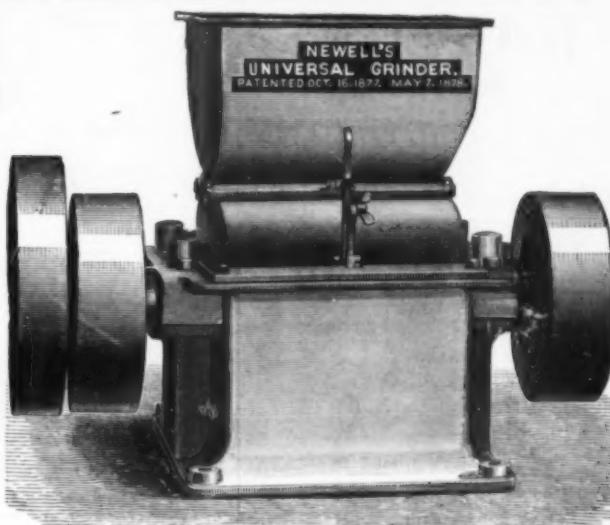
FEED MILLS.

Special Mills

For Bone, Fish-Scrap and other Fertilizing Material.

MILLS FOR GENERAL USE,

In place of the Burr Stone.



ROTARY

Hand-Power Rock Drills.

Great Saving in Time and Money.

Also Agents for UNITED STATES and CANADA for ROSE, DOWNS & THOMPSON'S ENGLISH OIL MACHINERY.

Please Send for Cuts and Prices.

NEWELL UNIVERSAL MILL CO.

10 Barclay Street, NEW YORK.



THE E. M. BIRDSALL COMPANY, AUBURN, N. Y.

Manufacturers of

TRACTION and PORTABLE STEAM ENGINES.

—UNSURPASSED—

FOR

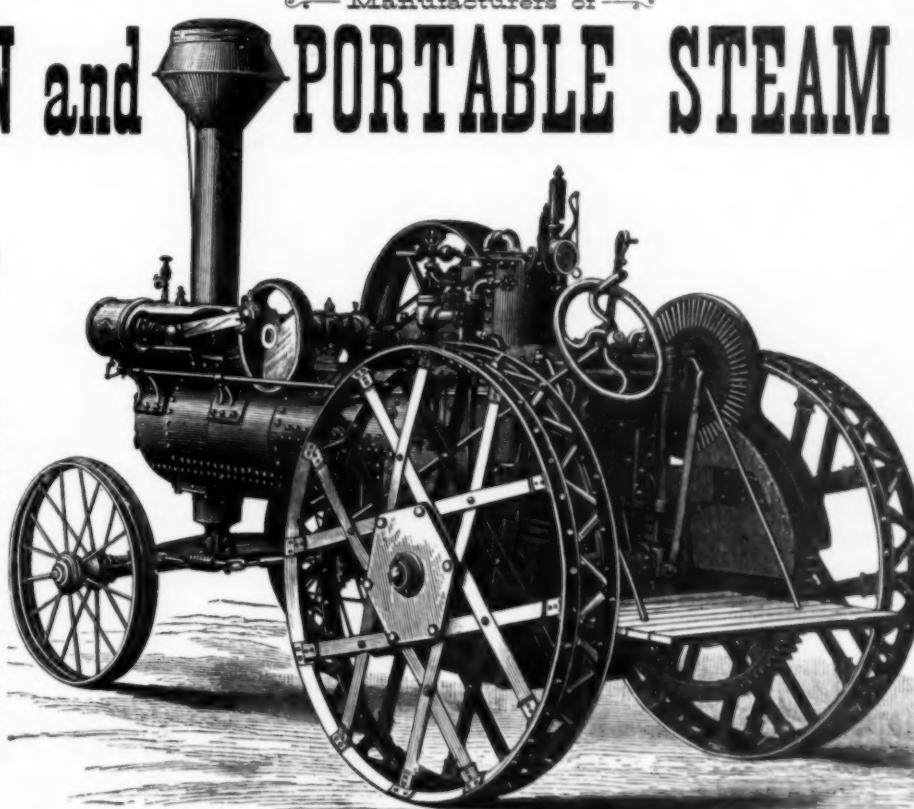
Power, Light Weight, Economy in Fuel and Water, Efficiency, Simplicity and Durability.

—UNSURPASSED—

FOR

Power, Light Weight, Economy in Fuel and Water, Efficiency, Simplicity and Durability.

The Traction Engines are furnished with Birdsall's Patent Driving Wheel, which is made expressly for soft or muddy roads; they are warranted to travel and take a load on roads that are too soft to be used by any other traction; are very simple; easily managed; better made and made of better material and decidedly the best finished engine in the market. A prize will be given to every farmer who tries them and does not find by experience that they are not excelled by any and superior to most.



THE TRACTION ENGINE.

The Novelty Saw Mill is the only mill in the world built on truck wheels, and is gotten up on entirely different principles from any other. The cutting is done with the under side of the saw and with the grain of the wood instead of against the grain as in all other mills, thus saving largely in power required to drive the saw; they are gotten up expressly for light power, and are warranted to run with from $\frac{1}{2}$ to $\frac{1}{3}$ less power than any mill built; a ten-horse engine gives excellent power for them, and will handle the heaviest timber to the best advantage. They can be set up ready for operation while the steam is being raised on the engine; and they will pay the owner on small jobs, owing to their portability, that will not pay on any other mill. They make excellent lumber; are easily managed, and with our Ten-Horse Traction or Portable Engine will cut from 3,000 to 5,000 ft. of lumber per day, according to the size of the logs and skill of the operator.

APRON and VIBRATING THRESHING MACHINES, embodying superior points of excellence and merit peculiar to themselves and possessed by none others, are built expressly for heavy work, and have unusually large separating and cleaning capacity; are matchless in strength, beauty of design and finish, and can be operated by any one of ordinary intelligence, owing to their extreme simplicity and solidity; are capable of taking care of all the grain that can be gotten to them, and in a superior manner.

WM. R. EMERSON, 618 N. Liberty St., Baltimore, Gen'l Agt.

for States of Pennsylvania, Maryland, Delaware, Virginia, West Virginia and North Carolina. Agents wanted in every county not already taken. Send for Circulars and Prices.

**NAYLOR'S
PATENT
CYLINDER CUP,**

Patented Oct. 9, 1883.



**CHEAPEST
AND BEST**

**Cylinder Lubricator
YET INVENTED.**

Possesses advantages superior to all others. Will feed any clean oil, whether heavy or light. Can be regulated to feed from 5 to 60 drops per minute. Only one valve to operate and only one connection to make. Cannot clog nor freeze. Every cup tested and guaranteed.

There is no expense in adopting this cup. No pipes nor valves necessary. It is the simplest cup in the market. There is nothing complicated about it.

**NICE LIGHT CYLINDER OIL,
50 Cts. per Gallon.**

AGENT FOR:

Forbes & Curtis' Patent Pipe Cutting and Threading Machine. A boy can cut and thread pipe to 6 inches. Will send one to any responsible person on 10 days trial.

Medart Patent Wrought Rim Pulleys. The strongest and lightest and best pulleys made, - 300 kept in stock.

Bennet & Codd Combined Screw Wrench and Pipe Wrench—a useful tool.

Lehigh Emery Wheel Company. Heston and Combination Packing for Engine Glands, &c.

Cleveland Rubber Company. Chapman Steam Trap. Todd's New Baxter Portable Engine and Boiler. Welch & Lawson Gas Engines. Codd's Cheap Packing.

FOR SALE CHEAP:

Three No. 1 Delameter Steam Pumps—new. One Corn Mill—capacity 6 to 12 bushels an hour. Two Holt's Portable Forges. One hundred Brass Tubes, 1½ inches diameter by 27½ inches long. Three hundred Wrought Rim Pulleys; Holland's Engine and Shafting Cups for Grease. Holland's Grease—Oline Compound. Also Pipe, Tubes, Fittings, Valves and all kinds of Brass Work. Babbitt Metal, Bolts, Lag Screws, Washers and Nuts. Gum and Leather Belting. Sheet Gum and Packings, Set Screws, Wrenches, Emery Wheels, Squirt Cans, Injectors, Ejectors and Inspirators, Gate Valves, Stocks and Dies. Pipe Cutters, Sledges, Handles, &c. Shovels, Pulleys, Shaftings, Hangers, &c., &c.

W.M. C. CODD,
306 and 308 Aliceanna St., BALTIMORE, MD.

DENAIAH THORNTON. JOHN CAHILL.

People's Machine and Boiler Works.

JAS. CLARK & CO. BUILDERS OF

Steam Engines, Boilers,

MACHINERY AND IRON HULLS,
Heavy and Light Forging a Specialty.

SOUTH SIDE OF THE BASIN, NEAR CITY YARD.

Convenient to Marine Railways. BALTIMORE.

If you are not already a subscriber to the BALTIMORE MANUFACTURERS' RECORD, send us \$3 and you will receive it regularly for one year, or six months for \$1.50.

FORBES LITHO. MFG. CO.

181 Devonshire St., Boston,
LITHOGRAPHERS & PRINTERS
BY EVERY KNOWN PROCESS.

DRY GOODS

TICKETS

Bands, Labels, &c.

FINE COLOR WORK A SPECIALTY.

Sole Agents for United States and Canada

—FOR—

**MAX CREMNITZ,
PARIS, FRANCE,**

MANUFACTURER OF

METAL SHOW CARDS.

The Brilliance of Color and Beauty of Finish of these Signs has never been equalled by any other manufacturer.

Galvanized Iron

CORNICE.

Architectural Sheet Metal Work.

Galvanized Iron Gutters made in lengths of 8 feet without a joint.

Corrugated Iron Sheds and Buildings.

**GEDDES'S PATENT METALLIC SKYLIGHT,
OR A SYSTEM OF GLAZING WITHOUT PUTTY.**

VENTILATION.—Ventilating Apparatus a Specialty. Correspondence Solicited.

JAS. W. GEDDES & CO.

67 and 69 North St., BALTIMORE.

OILS

Established 1858.
JAS. B. MACNEAL & CO.
Manufacturers, Jobbers and Dealers in
Burning, Machinery, Tan-
ners and R. R. Oils,
34 S. CALVERT ST., BALTIMORE.
Special quotations on application.

—Established 1793.—

H. BALDERSTON & SON,
MANUFACTURERS OF
WIRE GRATING FOR WINDOWS,

Doors and Office Railing, Wire Screens for Banks, Churches and Store-Fronts. Woven Wire, Wire Tree-Guards, Sieves, Screens for Coal, Sand, &c.

66 S. Calvert Street, Baltimore.

**The Favorite
TRANSFER Steamer "MARYLAND" ROUTE.**
THROUGH PULLMAN CARS FOR
BOSTON
Without Change.

LEAVE CHARLES-ST. DEPOT at 3 P. M. week days; Sundays at 5.40 P. M., arriving in Boston at 7.55 A. M. next day.
Ask for Tickets via New York & New England Railroad at Pennsylvania Railroad Ticket Offices.

JANNEY & CONGDON,

Manufacturers and Dealers in Every Description of

Goodyear's Rubber Goods,

—Including in Part:—

RUBBER BELTING, HYDRANT HOSE, STEAM, SUCTION, AIR BRAKE, OIL, AND ENGINE HOSE, LINEN AND COTTON HOSE, STEAM PACKING, OAK-TANNED LEATHER BELTING, CUT LACING AND LACE LEATHER SIDES, HEAVY AND LIGHT RUBBER CLOTHING, HORSE CLOTHING, RUBBER DOOR MATS, SPITTOONS, FIRE BUCKETS, GAS AND ACID TUBING, BALLS, TOYS, COMBS, DRUGGISTS' GOODS, STATIONERS' GOODS, AIR GOODS, (BEDS, PILLOWS, CHAIR CUSHIONS, INVALID CUSHIONS, &c.)

Headquarters for Anything in

Goodyear's Rubber Goods,

At Bottom Prices and in Quantities to Suit.

JANNEY & CONGDON

8 N. Charles St., Baltimore.

CAREW'S PATENT WIRE CUTTER.



These goods have recently been greatly improved. They are now made throughout of

Forged Steel.

The advantage of this cutter is seen at a glance. The adjustable jaws are its main feature. These are made of the best tool steel, and are brought to a keen cutting edge before being tempered. The cutting quality is un-parased. Whenever they become dulled by use, they can easily be removed, by driving from the end showing prick-mark, ground, and as easily replaced. This may be repeated as often as expedient; or they can be replaced by duplicate jaws, thus obviating the necessity of purchasing new cutters. Five sizes—6, 8, 10, 12 and 14 inch.

M. W. ROBINSON, Sole Agent, 79 Chambers St., N. Y.

A. EDW. BARTHEL, ENGINEER.
111 Liberty St., N.W. York. P. O. Box 2837.
SOLE MANUFACTURER OF THE
REISERT, STAUFFER AND BARTHEL
Lubricators and Solidified Oil

The most economical, perfect, practical, simplest, cheapest and elegantly finished Lubricators ever put on the market. One million sold within a couple of years. The Barthal Solidified Oil or Lubricating Compound is used with the Lubricators exclusively. Whoever has once tried this Lubricant will never again use oil or any other lubricating compounds. Send for Illustrated Catalogue.

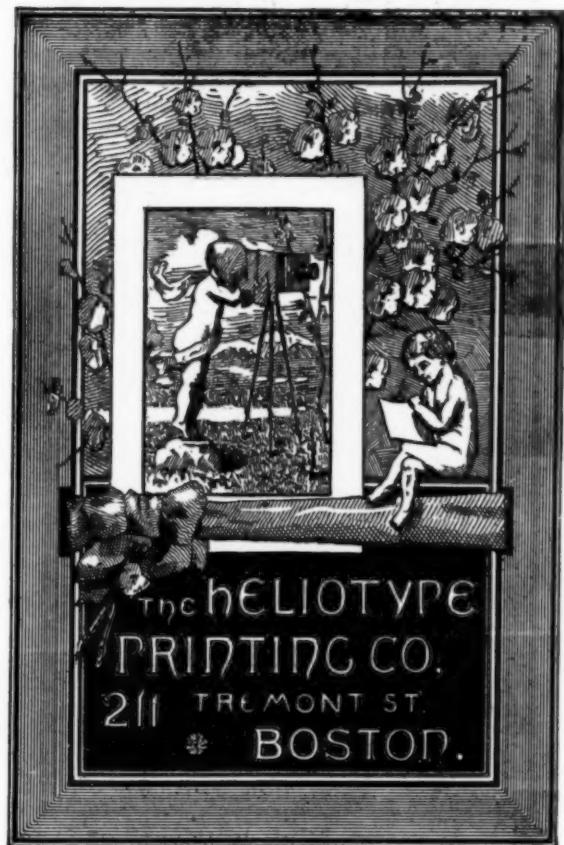
STEAM PUMPS FOR EVERY DUTY.

Best
Boiler Feed
PUMPS
in the
World.

Acme.
Bucket Plunger.

VALLEY MACHINE CO.,
Easthampton, Mass.

Heliotype Lithographs Printed by Steam.



Heliotype Cuts to Print with Type.

OVER THIRTY COMBINATIONS
MADE BY ONE APPARATUS.
HEALTH
—BY—
EXERCISE,
ADAPTED FOR
FAMILIES OR SCHOOLS.

Used and recommended by Physicians all over the country. Can be seen day or evening at the office of

GIFFORD BROTHERS,
Home Gymnasium Mfg. Co.
50 W. 36th St., New York.

Illustrated Circular sent free.



Fig. 3. CURVED BOARD—To strengthen the Back, Neck, Abdominal Muscles and Expand the Chest.

The True Idea  **of Assurance.**
Women's Mutual Insurance and ACCIDENT COMPANY.

PRESIDENT.
ELIZABETH B. PHELPS.
FANNY M. GERARD, Treas. ELIZABETH S. ROBERTS, Secy.
ALFRED K. HILLS, M. D., 465 Fifth Avenue.
JOHN A. KAMPING, Attorney and Counsel, 128 Broadway, New York.

The Company is incorporated under the Laws of New York, approved by the Supreme Court and Superintendent of the Insurance Department, and subject to the latter's supervision.

ITS OBJECT
is surely and skilfully to provide an indemnity for loss by death and accidental disablement.

ITS PLAN
consists in assessing the members ratably according to age in the Life Class, and according to occupation or degree of risk in the Accident Class whenever a loss in either class occurs. In other words, the actual losses only are paid by the policy holders, which thus secures the most economy.

ITS MEMBERSHIP
comprises persons between the ages of 15 and 87, of approved physical condition. The Life Class is separate and distinct from the Accident Class, members being liable for losses only occurring in the class to which they belong. This company, having been organized for the purpose of removing the prejudice which creates discrimination in Life Insurance against women, has adopted the broad principle of no discrimination in membership as aforesaid of sex.

This Company requires Agents in every city, town and village, to whom liberal terms will be given. Address as above.

VICE-PRESIDENT,
MARGARET HOLCOMBE.
CORNELIA KAMPING, Actuary.
MEDICAL EXAMINER.

MARY PUTNAM JACOBI, M. D., 110 W. 34th St.

ELIZABETH S. ROBERTS, Secretary.

226 Fourth Avenue, New York.

Apply to

ELIZABETH S. ROBERTS, Secretary.

226 Fourth Avenue, New York.

Address as above.

ITS SAFETY AND SECURITY
consists in its economical system, its certainty of solvency, (for it incurs no risk but what the members may discharge by one assessment,) and its Security Reserve Fund, which in time, is calculated, will make a member's membership self-sustaining.

ITS RATES OF ASSESSMENT
are safer than those adopted by others, and are no more expensive.

FINALLY,
This company confines itself to the legitimate business for which insurance has been adopted—protective and encouraging legislation; it proposes to adhere strictly to business principles in its management, and to establish the fullest protection to its members in a manner the simplest, cheapest and most complete of any organization of equal safety. Membership may be acquired by letter.

Philip Judge, Manager.

Rates \$3.00 and \$3.50 per Day.

PATENT CLASP PULLEY

Made in Halves. Same Price as Whole Pulleys.

SHAFTING, HANCERS,

Castings of Every Description Made. Stationary, Distillery, Mill and Boiler Work.

JNO. N. MARQUETTE, 6 W. Falls Ave., Baltimore.

Devon Inn,
Devon, Penna.,
H. J. & G. R. CRUMP.

The Grand Hotel,
Catskill Mountains,
EDW'D A. GILLETT.

COLONNADE + HOTEL,

Chestnut St., Cor 15th, one block from New Penna R. R. Depot,

H. J. & G. R. CRUMP.
E. A. GILLETT.

PHILADELPHIA.

Favorite Resorts for all Southern Travel.

ESTABLISHED IN 1847.

Always a Favorite Hotel
For Southern Travel.

REVERE HOUSE,

BOWDOIN SQUARE,

BOSTON, MASS.

Central location,—near all the principal Business Houses, Theatres, &c. Horse Cars to all parts of the city and to and from all Railroad Stations pass the door. The house still retains its old-time reputation for excellence of table and service.

CHAS. B. FERRIN, Proprietor.

GALT HOUSE,

LOUISVILLE, KENTUCKY.

THE PALACE HOTEL OF THE SOUTHWEST.

Rates \$3.00 to \$4.00 per Day.

A. R. COOPER, Manager.

BAY STATE HOUSE

—WORCESTER, MASS.—

W. L. SHEPARD, Proprietor.

This House has been thoroughly repaired and renovated, and will be KEPT STRICTLY FIRST-CLASS IN EVERY RESPECT.

The Only First-Class Hotel in the City.

Rates, \$3 and \$3.50 per day.

BURNET HOUSE,

Third and Vine Streets, Cincinnati, Ohio.

MOST CENTRAL LOCATION IN THE CITY.

A Strictly First-Class Fire Proof Hotel.

Rates, \$3 to \$4 Per Day

DUNKLEE, ZIMMERMAN & BARNES, Proprietors.

LOUISVILLE HOTEL

LOUISVILLE, KENTUCKY.

PHILIP JUDGE, - - - Manager.

Rates \$3.00 and \$3.50 per Day.

WASHINGTON HOTEL,

707 to 711 Chestnut Street, PHILADELPHIA, PA.

R. W. FARR, - - - Manager.

This Hotel, with its desirable location, is noted for its large and well-ventilated rooms, home comfort and excellent cuisine. Rates \$2.50 per Day.

THE BILLINGS & SPENCER Co.
HARTFORD, CONN.

MANUFACTURERS OF
SCREW PLATES AND DIES, GENUINE PACKER
RATCHET DRILLS, BILLINGS' PATENT DOUBLE-ACTION RATCHET
DRILLS, CLAMP, DIE AND COMMON LATHE DOGS, ADJUSTABLE
POCKET WRENCHES, TAP AND REAMER WRENCHES, BAR-
WICK PIPE WRENCHES, COMBINATION PLIERS, BEACH'S
PATENT THREAD-CUTTING TOOLS, ALL TOOLS MANUFACTURED
BY US ARE DROP FORGED FROM BEST BAR IRON
AND CAST STEEL FOR THE PURPOSE FOR WHICH THEY ARE DESIGNED.

**Greatest ROCK Breaker
On Earth.**

CAPACITY { A TON A MINUTE.
Don't Forget It!
Guaranteed to do Double the Work of any other or
money refunded. SEND FOR CIRCULARS.
Also Engines, Boilers, Stamp Mills and Mining Machinery

GATES IRON WORKS,
52 Canal St., Chicago.

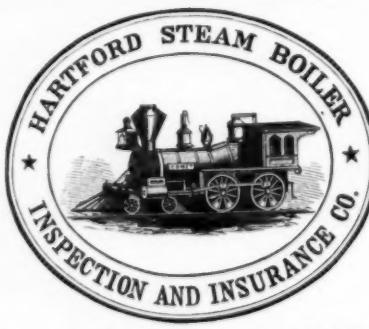
**STEEL
CASTINGS**

—CHESTER STEEL CASTINGS CO.—
Office, 407 Library Street, Philadelphia. Works, Chester, Pa.

FROM 1-4 to 15,000 lbs. WEIGHT.
True to pattern, sound, solid, free from blow-holes, and of
unequalled strength.
Stronger and more durable than iron forgings in any position
or for any service whatever.
30,000 CRANK SHAFTS and 15,000 GEAR WHEELS of
this steel now running prove this.
CRANK SHAFTS and GEARING specialties.
STEEL CASTINGS of every description.
Send for Circulars and Prices to

—ISSUES—
POLICIES OF INSURANCE

AFTER

A CAREFUL INSPECTION
OF THE**BOILERS.**

Covering all Loss or Damage to **Boilers, Buildings and Machinery**
ARISING FROM STEAM BOILER EXPLOSIONS.

The Business of the Company Includes All Kinds of Steam Boilers.

Full information concerning the plan of the Company's operations can be obtained at the **COMPANY'S OFFICE, Hartford, Conn.**, or at any agency.

M. ALLEN, Pres. **W. B. FRANKLIN, Vice-Pres.** **J. B. PIERCE, Secy.**

BOARD OF DIRECTORS:
J. M. ALLEN, President.
LUCIUS J. HENDERSON, President Alina Fire Insurance Co.
FRANK W. CHENEY, Ass't. Pres. Cheney Bros. Silv. Mfg. Co.
CHARLES M. BACHE, Beach Co.
DANIEL FISHER, Pres. American Express Co.
GEO. BATHOLMEW, Pres't American National Bank.
RICHARD W. H. JARVIS, Pres't Colt's Fire Arms Mfg. Co.
THOMAS O. ENDERS, Secretary Alina Life Insurance Co.
LAVERETT BRAINARD, of Case, Lockwood & Brainard.

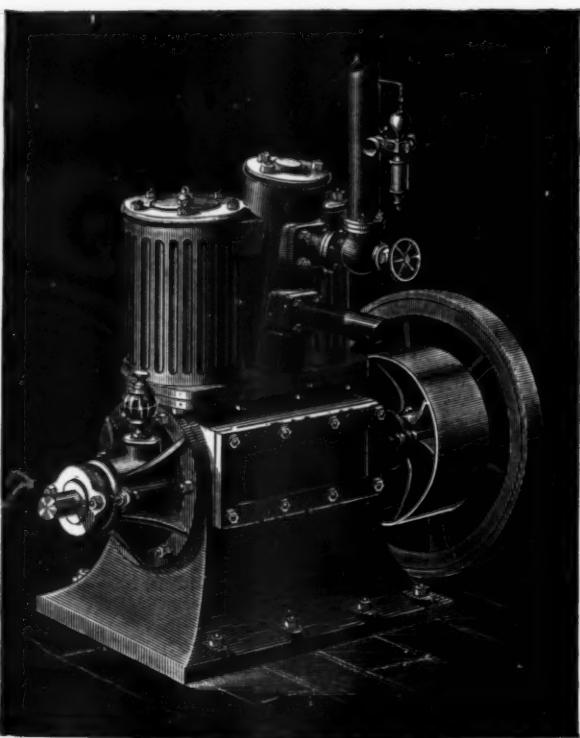
LAWFORD & MCKIM, Agents for Maryland, 10 S. Holliday St., Baltimore, Md.

**PATENT
Wood Working Machinery**
of the Latest and Most Improved
Designs for
Planing Mills, Furniture Factories, Chair
Factories, Car and Agricultural Works,
Carriage and Buggy Shops and General
Wood Workers. Manufactured by
The * Egan * Co.
(Successors to Cordesman & Egan Co.)
THOS. P. EGAN, Pres. EDWIN RUTHVEN, Secy.
FREDERICK DANER, Supt.
228 to 348 W. Front Street, CINCINNATI, O., U. S. A.

Westinghouse Automatic Engine

Over 600 Engines Now in Use. Average Sales, 1,200 H. P. Per Month.

[REAR VIEW, WITH ONE FLY-WHEEL REMOVED.]



THE Westinghouse Automatic Engine has no equal in sensitiveness and close regulation, low cost of maintenance and general convenience; and in all other essential features of a First-Class Engine it is guaranteed to have no superior.

mills; plaster mills; stamp mills; for cotton ginning; electric lighting; draining and irrigation; and as a relay to deficient water power; also for fast steam yachts and tugs. Especially adapted to coupling direct to line shafts, roll trains, beaters, and all kinds of special machinery. Send for Illustrated Circular and reference list, and state the horse-power required. Our prices are moderate.

The Westinghouse Machine Co., Pittsburg, Pa.

Address, if more convenient, our following Branch Offices:
94 Liberty St. New York. 14 S. Canal St., Chicago. 401 Elm St., Dallas, Texas.

THE Greenfield Vertical Engines

From 2½ to 30-Horse Power.

COOKE & CO.

—22 Cortlandt Street, NEW YORK.—

SALES AGENTS AND DEALERS IN

General

Machinery AND Supplies.



These engines are manufactured with great care, from the best materials, and the workmanship is of the best quality, all the parts being fitted in a thorough and workmanlike manner.

The Steam Joints are scraped and ground to a perfect bearing, thus obviating the annoyance of gum or paper joints.

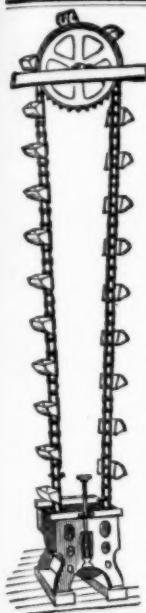
The Shaft, Piston Rod, Valve Rod, and Cross-head Pin, are made of forged steel. The Cross-head is fitted with composition gibbs, that are adjustable (to take up the wear). The piston is fitted with spring rings. All the moving parts are evenly balanced, thus assuring steadiness and smooth running.

These engines are finely finished and the parts are made interchangeable. They are all that good work and good material can possibly make them.

The engine is furnished with Boiler on same base when called for.

Agents for Root's Force Blast Blowers, Watson's Forges, Key-stone Injectors, Waters' Governors, Empire Chains, &c.

Address COOKE & CO.,
22 Cortlandt St., N. Y.
In writing, please mention this paper.



ANTI-FRICTION ROLLER DETACHABLE CHAIN BELTING.

Especially adapted for the rapid and economical handling of CLAY, TILE, LIME, PLASTER, CEMENTS, BROKEN STONE, COAL, ORES, SAND, DRY and WET TAN, SAW DUST, SLABS, PULP, GRAIN, FLOUR, ICE, &c., &c., &c. For ELEVATORS, CARRIERS, CONVEYERS, &c., &c. Propelling STEAM-BOATS and for other DRIVING PURPOSES

MANUFACTURED AND SOLD BY THE

Lechner Manuf'g Co.

COLUMBUS, OHIO.

Send for Illustrated Catalogue.

JARVIS PATENT FURNACE



—FOR SETTING STEAM BOILERS.—

Economy of Fuel, with increased capacity of Steam Power. Like the Siemens Process of Making Steel, it utilizes the waste gases with hot air on top of the fire. Will burn all kinds of waste fuel without a blast, including Slack Coal, Sawdust, Logwood Chips, etc. Send for Circulars.

Jarvis Engineering Co.,
A. F. UPTON, Treas. and Genl. Manager,
7 Oliver St., Boston, Mass.
JOSHUA C. COE, Agent for Maryland and Virginia,
18 Second Street, Baltimore, Md.

SOUTHERN REFERENCES:

Eagle and Phenix Mfg. Company, Columbus, Ga.
Lane Cotton Mills, New Orleans, La.
Central Rolling Mills, Louisville, Ky.
Anniston Mfg. Co., Anniston, Ala.
J. P. King Mfg. Co., Augusta, Ga.
Coosaw Mining Co., Charleston, S. C.
Rose Mining Co., Charleston, S. C.
Maryland Pavement Co., Baltimore, Md.
Brush Electric Light Co., Baltimore, Md.
Ettrick, Mattoaca and Battersea Mfg. Co.'s, Petersburg, Va.

Symington Bros. & Co., Baltimore, Md.
Rasin Fertilizing Co., Baltimore, Md.
Henry McShane & Co., Baltimore, Md.
Tanner & Delaney Engine Co., Richmond, Va.
Sibley Mills, Augusta, Ga.
Graniteville Mfg. Co., Graniteville, S. C.
Charleston Bagging Co., Charleston, S. C.
P. H. Mayo & Bros., Richmond, Va.
Nashville Mfg. Co., Nashville, Tenn.
National Mfg. Co., Nashville, Tenn.

Union File Comp'y

311 to 315 North St., Baltimore, Md.

MANUFACTURERS OF

FILES AND RASPS

Made from the Best Refined Cast Steel.

With all the requisite facilities to produce a first-class article, we are enabled to offer Files that will give entire satisfaction.

MORITZ & KEIDEL, Agents, 48 and 50 German St., Baltimore, Md.

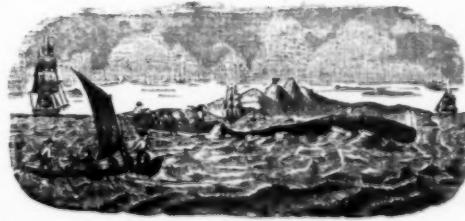
Business Established 1832 (on Present Premises.) The Oldest House in the Trade.

WM.C. ROBINSON & SON

81 SOUTH ST., BALTIMORE, MD.

MANUFACTURERS OF
AND
Wholesale Dealers in

OILS.



Specialties—Oils for Cotton and Woolen Mills, Railways, Tanners' and Machinery Use.

We always have in stock OILS for every known purpose. Agents for Downer's Spindle, Champion and Mineral Sperm, Meriam & Morgan Paraffine Co.'s Paraffine, and Williams' Odorless Lubripene OILS.

THE NEW PULSOMETER

The cheapest, strongest, most simple, compact, durable, effective and economical

STEAM PUMP IN THE MARKET,

for raising liquids under and up to 100 feet. No Machinery, No Oil, No Special Care. Can be worked suspended by a chain. Will pass grit, mud, sand, pulp, etc., without injury to its parts. Needs only a clean pipe from boiler to run it. Price, \$600 gallons per hour, \$50; 1,200 do. \$75; 3,600 do. \$100; 6,000 do. \$150; 10,000 do. \$175; 15,000 do. \$225; 25,000 do. \$275; 45,000 do. \$400; 60,000 do. \$500; 120,000 do. \$1,000. Compare this with any other Pump List.

Write for illustrated descriptive book with testimonials, &c. Mailed free.

PULSOMETER STEAM PUMP CO., 83 John St., New York City, U.S.A.



IRON ROOFING SIDING.

CRIMPED AND CORRUGATED.

W. G. HYNDMAN & Co.
52 & 54 East Second St., Cincinnati, O.

—FOR—

Saw Mills, Factories, Cotton Sheds, Dwellings, &c.

Send for Circulars and Prices. Mention this paper

CINCINNATI CORRUGATING CO.

—SUPERIOR—

Corrugated Iron Roofing, Siding, Ceiling, Arches, Laths.

GREATEST ECONOMY, DURABILITY, EFFECTIVENESS.

Send for our New Illustrated Catalogue.

CINCINNATI, OHIO.

JOHN MERRY.

West Side Galvanizing Works,

535 to 547 West 15th Street, New York.

—MANUFACTURER OF—

The "LION" and "PHOENIX" Brands of Galvanized Sheet Iron.

Corrugated Iron for Roofing or Siding, Tin Plates, Solder, Slating and Roofing Nails, Tinned Galvanized and Black. All kinds of Iron work Galvanized or Tinned to order.

METALLIC SHINGLES.



\$5.50 per square

ANGLO-AMERICAN ROOFING CO.

22 Cliff Street, New York

EDWARD KIRKNESS

338 East 23d Street, NEW YORK.

—MANUFACTURER OF—

SNYDER'S LITTLE GIANT

HORIZONTAL

Engine & Boiler

Also, Yacht Engines.



Send for New Illustrated Catalogue, mentioning this Paper.

Wm. H. Emerson, Baltimore,
Genl. Agt. for the Southern States.

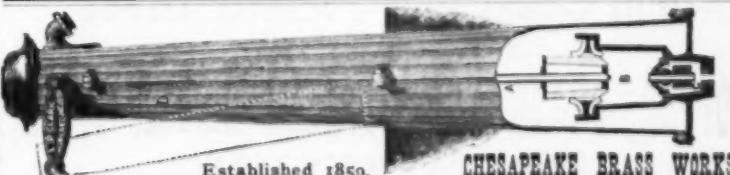
JOHN R. EDWARDS, Blank Book Manufacturer,

LITHOGRAPHER, PRINTER AND STATIONER,

2, 4, 6, 8, 10 and 12 North St. and 120 and 122 W. Baltimore St.

—BALTIMORE, MD.—

Specialty: Account Books to order for Manufacturing Establishments, Banks and Insurance Companies. Estimates Furnished.



Established 1859.

CHESAPEAKE BRASS WORKS,

L. P. CLARK & SONS, 34 N. Holliday St., BALTIMORE.

PORTABLE FORGES

Empire Portable Forge Co.

Cohoes, N. Y.

Send for Catalogue.

SPERRY'S**UPWARD * JET * CONCENTRATOR,**

The cheapest and best in the world. Adapted to all concentratable ores and slimes of GOLD, SILVER, COPPER, TIN, ZINC, &c., and MILL TAILINGS.

Will Concentrate from 50 to 100 tons in 24 Hours

PRICE \$300. NO ROYALTY.

Weight—140 Pounds. Power Required only $\frac{1}{4}$ of 1 Horse.

Sperry's * Wet * Sizing * Machine

Small and Compact. Entirely New Principle.

Crushing Rolls, Rock Breakers, Stamp Mills and General Mining Machinery and Supplies.

Full-size Concentrating Plant in operation at 12 Cortlandt St. Send for Circular.

J. A. SPERRY, GENERAL AGENT, 12 CORTLANDT ST., N. Y.

WOOD-WORKING MACHINERY

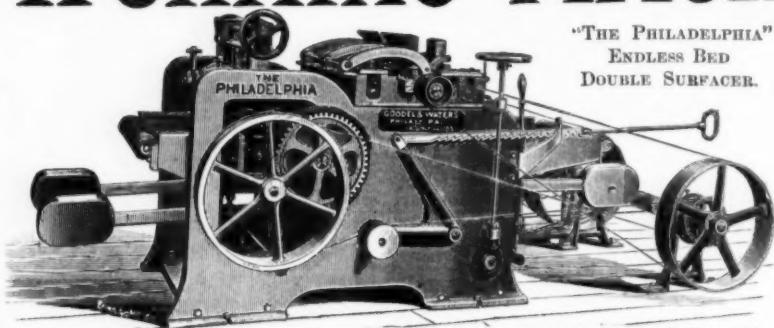
FOR

Planing Mills,

Railroad

Shops,

Car Builders,



Cabinet,

Carriage,

Sash, Door

and Blind

Makers.

Send for Circulars.

GOODELL & WATERS, Cor. 31st and Chestnut Sts., Philadelphia, Pa.

CUMBERLAND DUGAN & CO.,
No. 26 S. Charles Street, Baltimore,
Southern Agents.

Always Use the Best!

CHEAPEST in the END!



This Belt is stitched in seams one inch apart before putting on the outside Rubber cover, which is made SEAMLESS and therefore cannot split. For endless Belt it is the ACME of PERFECTION, as the splice cannot separate. First cost somewhat more than the cheap Belts generally sold, but well worth the difference. Send for price-list and samples of Belts.

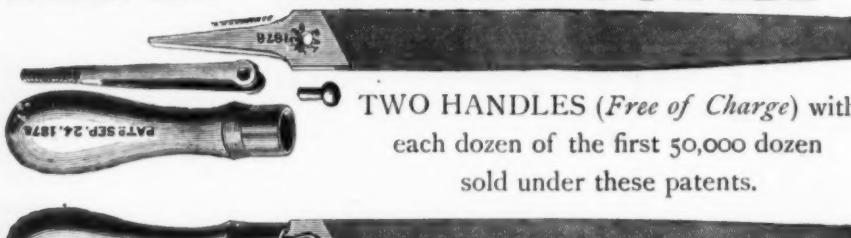
Giant Gum Belting!

REUTER & MALLORY,

Dealers in

Manufacturers' Supplies,

22 Light Street, BALTIMORE, MD.

NEW AMERICAN FILE COMP'Y.

TWO HANDLES (*Free of Charge*) with
each dozen of the first 50,000 dozen
sold under these patents.

ESTABLISHED 1863.

DAILY CAPACITY, 1,000 DOZEN.

PAWTUCKET, R.I., U.S.

**Roll, Sheet and Platers' Brass,
GERMAN SILVER.**

COPPER, BRASS AND GERMAN SILVER WIRE,

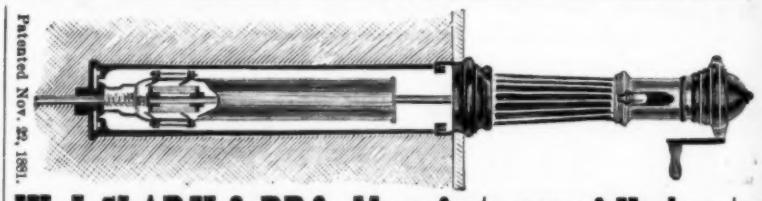
BRASS and COPPER TUBING,

BATTERY and PLATERS' SILVER, &c.

PHILIP R. VOGEL, JR.

Manufacturers' Agent,

No. 79 German Street, Baltimore, Md.



W. J. CLARK & BRO., Manufacturers of Hydrants

These Hydrants are made of the best material, and are guaranteed to be entirely non-wasting and non-freezing. The works of these Hydrants can be taken out and repaired without breaking the ground. **SEND FOR CIRCULAR.** No. 38 N. Holliday Street, BALTIMORE, MD.

HAMILL, BROWN & CO.

Maryland Queensware Factory.
Manufacturers of Stone China, White
Granite, C. C. and Decorated Ware.
Corner Fawn and President Sts.

GEO. F. BLAKE MANFG. CO.

BUILDERS OF

IMPROVED PUMPING MACHINERY

BOILER,
Feed,
FIRE
—AND—
TANK
PUMPS.



BLAKE'S IMPROVED BOILER FEED PUMP.

44 Washington St., Boston. 95 & 97 Liberty St., New York.

For Particulars,
Address

Send for Illustrated Catalogue.



SILVER MEDAL AWARDED AT THE "NATIONAL EXPOSITION OF RAILWAY APPLIANCES," CHICAGO, JUNE, 1881.

GANDY'S PATENT

AWARDED MEDALS AT

Berlin.....	1879.	New Zealand.....	1882.
Hamburg.....	1878.	Cincinnati.....	1879.
Sydney.....	1879.	New York.....	1880.

Machine Belting

MADE PERFECTLY STRAIGHT AND ANY LENGTH WITHOUT JOINTS.

For Main Driving it is the Best.—

Much Cheaper than Leather.

MANUFACTURED BY

THE GANDY BELTING CO.

BALTIMORE, MD.

UNION STONE COMPANY,

Grinders & Polishers'
Supplies.

—EMERY.—

Union Emery Wheels,
Emery Wheel Machinery,
Emery Hones and
Rub Stones, Emery
Wheel Dressers,
Emery Cloth.

Diamond Tools,
Automatic Self-Grinder Mach. No. 88

Ware's Patent
Anti-Bursting Flanges.

QUARTZ.

Wooden Polishing Wheels,
Wood Wheel Machines.

CORUNDUM.

Polishing Belts, Polishing
Belt Machines, Polishing
Lathe,
Polishing Leather, Polishing
Materials of
all kinds.

Pumice-Stone,
Powdered and Lump.

CLUE,

Especially for Wooden
Polishing Wheels
and Belts.

UNION EMERY WHEEL.

CATALOGUE

ON

Application.

38 and 40 HAWLEY STREET, BOSTON, MASS.

JACKSON & TYLER, Agents, 16 and 18 S. Howard Street, BALTIMORE, MD.

GEO. V. CRESSON,

PHILADELPHIA
SHAFTING WORKS,

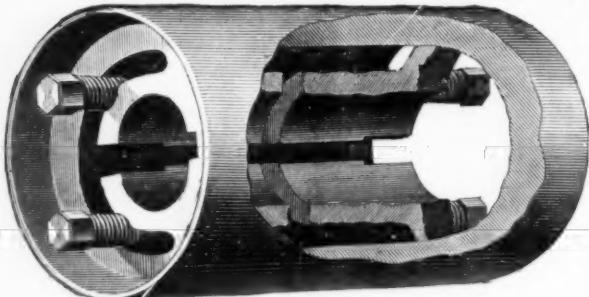
18th and Hamilton Streets, Philadelphia, Pa.

—MANUFACTURER OF—

SHAFTING,

And all the Appartenances used in the

Transmission of Steam Power.



Patent Internal Clamp Coupling for Shafting.

U. S. CENTENNIAL, 1876.
First Premium.

Most easily applied and removed, and has a much stronger grip on Shaft than any other Coupling yet invented.

In use by all First-Class Machinists and Manufacturers. Many thousands in practical use.

MECLA POWDER.



Safest, Strongest and Best
HIGH EXPLOSIVE
IN THE MARKET.

All grades and sizes supplied at short notice at closest prices. CAPS, FUSE and ELECTRIC GOODS at hardpan prices.

THE HECLA POWDER CO., 57 Broadway, N. Y.

Buffalo Cupola and Forge Blowers,

PORTABLE FORGES,
Blacksmiths' Hand Blowers,
STATIONARY BLAST FORGES,
HEATING AND ANNEALING FURNACES.



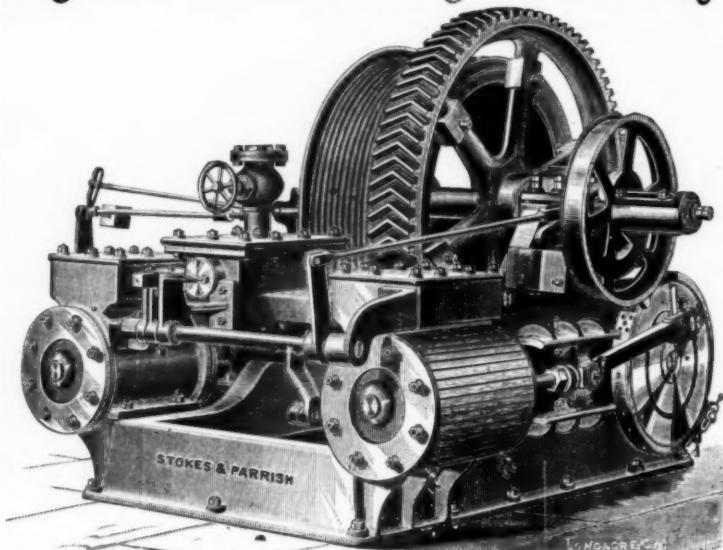
Buffalo Forge Co.

490 BROADWAY, BUFFALO, N. Y.

STOKES & PARRISH,

PHILADELPHIA.

High-Grade Hoisting Machinery.



Blast Furnace Hoist,

With Vertical or Horizontal Cylinder Engines. Hoisting Machinery for Mines, Blast Furnaces, Inclined Planes, Portable Hoisting Machines.

Hydraulic and Steam Power Passenger and Freight Elevators.

Safety—Speed—Smooth Action.

All Kinds of HOISTING MACHINERY a Specialty.

Works and Office, 30th and Chestnut Sts., Philadelphia.

New York Office, 95 and 97 Liberty St., New York.

MERCHANT & CO.

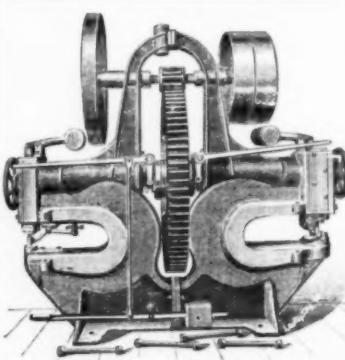
525 Arch St., Philadelphia.

TIN PLATE AND METALS,

Electrical Bare and Insulated Copper Wire.

Spring Sheet Brass,	High Sheet Brass,	Seamless Brass and Copper Tubes,
Engraver's Brass,	Brass Circles,	Brazed Brass and Copper Tubes,
Spring Brass Wire,	High Brass Wire,	Flat, Square, Half-Round
German Silver,	Copper Circles,	Brass Rods,
SHEET COPPER,	COPPER WIRE,	COPPER RIVETS AND BARS,
ZINC BATTERY PLATES,	PLANISHED COPPER,	COPPER RIVETS AND BARS,
		BRASS WIRE CLOTH.

BRONZE SHEET METAL.



COMBINED

Punch and Shear

BUILT BY

HILLES & JONES,
WILMINGTON, DEL.

The annexed cut is the design of all sizes that are driven by belt power. When desired we place a small engine on the machine, the crank of which goes on where the pulleys are now shown. The punch and shear are entirely independent of each other, as they are each operated by a clutch, and the sliding-heads counterbalanced. For particular work the hand-wheel is used to set the punch to mark before throwing in the clutch. The stripper is adjustable to different thicknesses of iron.

GOVERNORS { For Water Wheels } Cohoes Iron Foundry & Mch. Co.
Send for Catalogue. Cohoes, N. Y.